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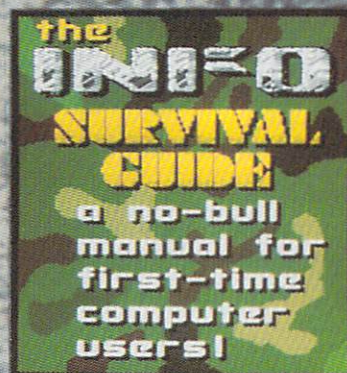
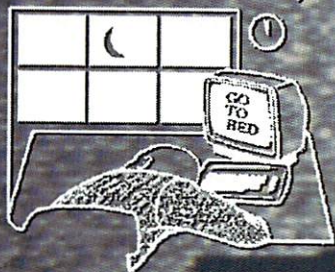
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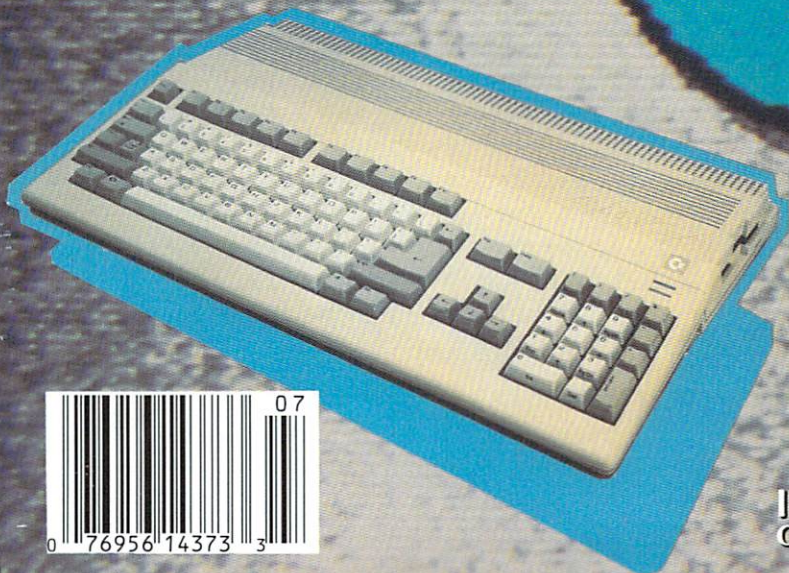
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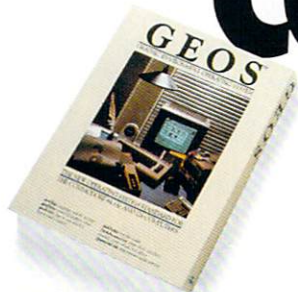
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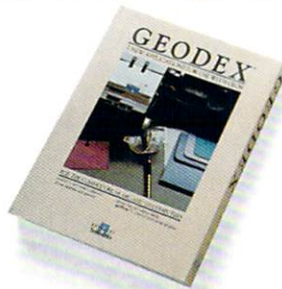
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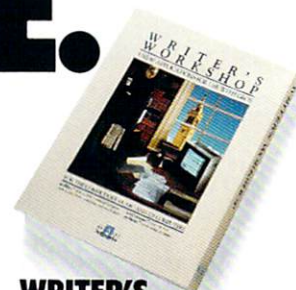
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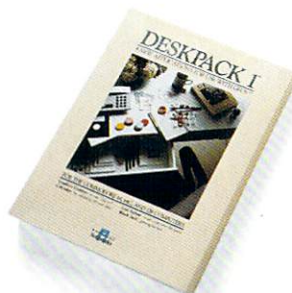
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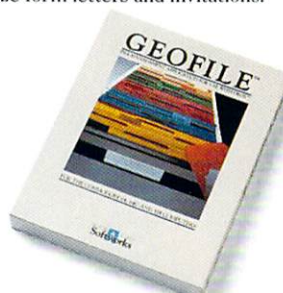
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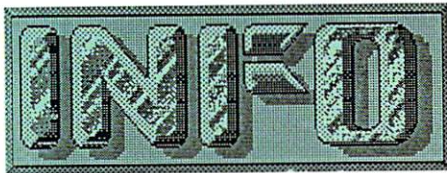
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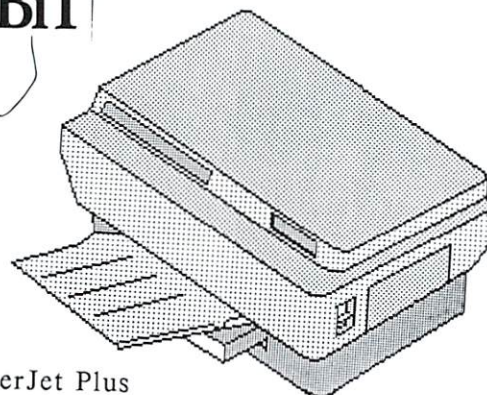
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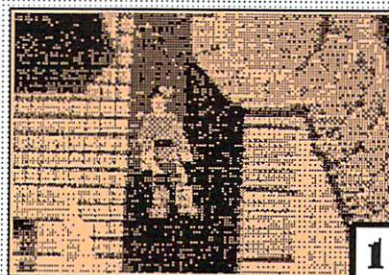
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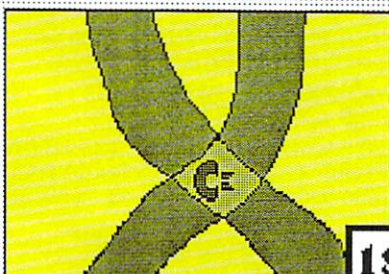
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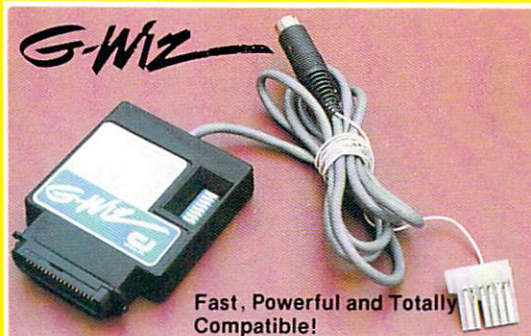
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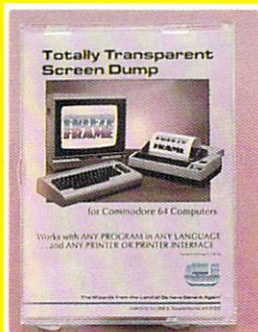


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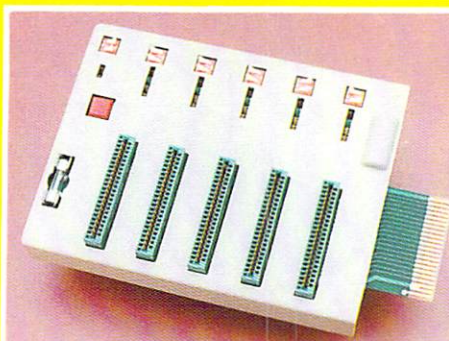
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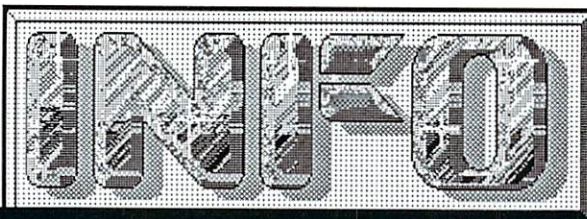
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WELCOME TO:



An Introduction and Short History.

WELCOME 50,000 NEW READERS

Welcome to INFO Magazine's WORLD DEBUT ISSUE! This is INFO's first issue handled by our new world-wide distributor, Select Magazines, Inc. While many of you have been getting INFO in the mail, from your local computer store, or from B. Dalton's or Waldenbooks, we calculate that about 50,000 of you are new readers looking at your very first copy of INFO! We hope you will feel right at home, and find INFO to be the most useful, entertaining, and straight-shooting Commodore computer magazine in print!

Because INFO is new to so many readers this issue, I wanted to personally welcome you to these pages, introduce you to the gang, tell you a little about what you will find between the covers, give you a short history of INFO, and tell you what we're all about

IN THIS ISSUE

In some respects, this is not a typical issue of INFO (but then, few of them *have* been)- we have new (cleaner) page borders, and a real production person. We are also very pleased to announce the merger with INFO of Jim Oldfield's legendary *Midnite Software Gazette* - one of the oldest and most respected journals in the Commodore community. Beginning this issue, "*Midnite*" will appear exclusively as a regular section in INFO!

Looking at the contents, I find we have ventured much further into satire, nostalgia, and controversy than in past issues- nobody really planned it that way, sometimes INFO just seems to have a mind of its own! Oh, there is still plenty of nutritional news, reviews, and helpful information, but I think you'll find some of the editorial "snacks" a refreshing addition.

ON THE MENU: Mindy Skelton is back in this issue with another fascinating interview; this time with Anne Westfall of *ARCHON* fame, Peggy Herrington tells us all about Amiga software that talks, and when we saw a regional edition of Don Romero's hilarious *C.H.U.M.P. Magazine* earlier this year we knew we had to have an encore for INFO readers. Also on tap:



Benn, "Howdy!"



Mark, "Hi!"



Tom, "Hi-ya, hi-ya!"



Megan, "What it is?"

Greetings from the INFO gang!

the INFO Survival Guide should help computing newcomers get past the first few hurdles, and some lucky reader is going to win the AMIGA 500 which we're giving away on page 75! You will find 20 games reviewed in color (see the Gallery), and another 6 products reviewed elsewhere in greater depth (including 2 new products from Commodore!) You will also find a critical examination of one of our competitors in the Editor's Page (we expect to get some mail on this one), and there are many surprises throughout.

(continued on pg. 73)

the

EDITORS' PAGE

The PET® Gazette With A New Name

COMPUTE!

The Journal for Progressive Computing™

Original COMPUTE! banner.

COMPUTE!, WE HARDLY KNOW YOU ANYMORE

The publishing industry is kind of like a fraternity, and it's considered 'unprofessional' to criticize other publications, especially if you're a "David" and your target is a "Goliath". But you know us. One of our regular columns is a cross-index of useful articles from other magazines because we believe you deserve to know when you might have missed something really informative in one of our competitor's publications. We rate Commodore magazines (including INFO!) in our Product RoundUp issues because we think it's important to acknowledge when those publications make a general improvement in their service to the reading public, and when they slide in the other direction. We hope this information has been useful to you in the past, and we plan to continue to provide it in the future.

We otherwise avoid more in-depth commentary about competing magazines; partly because you might doubt our objectivity, and partly because we figure you are smart enough to know when you are getting your money's worth from a magazine.

Recent (and historical) events surrounding COMPUTE! Publications, however, have accumulated to the point where we no longer feel we can remain silent. If it were just a matter of short-changing readers, we would just let the marketplace deal with COMPUTE! Publications (and it will). As you will see, however, a deeper wrong has gone unchallenged, as *COMPUTE!'s* true founder (in our opinion), and one of the industry's earliest contributors, Len Lindsay, has gone virtually without notice or material reward while both the Ego and Wallet of *COMPUTE!'s* "official" founder, Robert Lock, have swelled.

THE DOWN STAIRCASE

We've been predicting the demise of *COMPUTE!* magazine for over a year now, and while they haven't locked the doors and sent all the employees home *yet*, we still think the writing is on the wall for *COMPUTE!*. *COMPUTE!* is locked in a downward spiral: first ad pages declined, then editorial pages and color were reduced (all columns are now a single page without illustrations), type size got smaller, and the paper got thinner. This saves some money in the short run, but results in declining sales and subscriptions, which leads to further reduced advertising revenue, and the cycle is ready to repeat. If the continuous stream of letters and on-line messages we get from readers are any gauge at all, former *COMPUTE!* and *COMPUTE!'s Gazette* subscribers and readers are turning away in droves: they just don't think they're getting their money's worth anymore.

TYPE-IN PROGRAMS

One of the most frequent gripes voiced by the disenchanted is "those [darn] type-in programs!" If you have *last year's* copies of *COMPUTE!* and *COMPUTE!'s Gazette*, you essentially have *this year's* type-in programs. There is an insultingly high degree of repetition in the program listings in these magazines. Among the favorites are program renumberers, disk speedups, shoot-em-up games, and disk directory catalogers. Programs of questionable utility also seem popular ("Cassette Sleeve Maker" springs to mind.) Though the actual programs are new, they are very similar in function to previously published programs. There are already dozens of versions of these types of programs in the public domain for

(continued on pg. 76)

INFO

Reader Mail

Send comments, questions, and loose change to:

INFO Magazine, Box 2300, Iowa City IA 52244

Or send us EMail via these online services:

CompuServe	70215,1034
QuantumLink	INFO Mag
PeopleLink	INFO Mag
PlayNet	Ben D
BIX	infomag
Delphi	INFO

Please, do not call the INFO Offices! We don't have the staff to handle questions on the phone!

Mail From: OMESS QuantumLink
Date: Tuesday 31-Mar-87 00:20 est

Horrors! Tell me it is not true! While stopping into a local WaldenBooks, to hunt for the latest issue of my favorite mag, INFO! they told me they were no longer carrying it? Why? They said you guys are going subscription only! Please tell me they are wrong! As it is, there aren't enough INFOs to go around in my area! DON'T go subscription only! To quote a friend: Well, they're a Commodore mag, so maybe they're experimenting with Commodore style management.

Also, what will the low price of the Amiga 500 do to the C-128? I suspect that CBM will drop it for sure or they will kill the 64 line, and sell the C-128 at even lower prices. What do you think?

Sounds like your local Waldens got us mixed up with The Transactor. THEY recently went subscription-only, though I suspect they will end up back on the newsstands just as soon as the flood of protest mail flows in. Every WaldenBooks in the country still carries INFO. As for your question on the C64/C128, Commodore is pretty practical about such things, and we expect they will sell both until sales drop to the point of unprofitability. There is no doubt in our minds that the A500, especially, will impact C64/C128 sales hard. On the other hand, don't junk your C64 yet. It will remain a popular machine for a long time, thanks mainly to its installed base of over 6 million units, more than ANY other personal computer, including the IBM/PC. It will really boil down to a question of economy. A 64C is \$200, a 1541 at least \$150 more. That's \$350, and an A500 will sell for

\$600. We'll just have to see if there's a market for both. The C128 with a 1571, on the other hand, costs \$550, and that looks just too close to the Amiga price for comfort. -Mark & Benn

Dear INFO

"That's it for this time. Don't forget the required reading too: The Midnite Software Gazette, [etc.]...and Seventeen if you're a girl in junior high." [INFO #13] As an educator, a female, and a subscriber, I found your cutesy closing statement offensive and a sad reminder of the fact that boys dominate computer usage in our schools. Many of us in the field are working at encouraging females into electing more computer-related activities. I would have assumed your innovative magazine would support that concept but a careless statement like that gives me cause to wonder. Replace the word "Seventeen" with "Ebony" and "girl in Jr. High" with "guy in Harlem" and you've got the same insulting kind of message. I would put INFO on a reading list for students in Jr. High, but for the editorial staff of INFO I'd suggest any number of books and articles dealing with changing our internalized sexist values. If the current issue of Seventeen is devoted to career possibilities or creative computing--I apologize for underestimating your staff. If not, GROW UP.

-Trudy Kelly, West Redding CT

Well, I meant that little comment about Seventeen magazine to be just a joke. It has since been pointed out to me by my co-workers and you, our valued readers, that by suggesting that junior high girls read Seventeen rather than a computer magazine, I have insinuated that girls should have no interest in computers. Nothing could be further from the truth. My own daughter Jenny has a Commodore 64 system of her own and reads Seventeen magazine, too. Her interests are many and varied, and I hope they stay that way. On the other hand, my comment does reflect a degree of insensitivity on my part to the issue of sexism in computing, which surprises me. I've always considered myself a liberated kind of a guy. I guess that's what prejudice is: a bias we don't even see ourselves. I'll be working on it. As a part of my consciousness-raising, I'll begin by reading Mindy Skelton's excellent interview with Anne Westfall in this issue. -Mark

....continued on page 19

PHM PEGASUS
Electronic Arts
1820 Gateway Drive
San Mateo, CA 94404

INFO-rated



The PHM stands for Patrol Hydrofoil Missile craft, which stands for one mean little "boat"! While not quite as heavy on historical detail and ultra-realism as some naval simulations, there is enough to make **Pegasus** much more than just a shooting gallery. With sophisticated control and weapons systems taking the drudgery out of ship to ship combat, the player is free to concentrate on more esoteric concerns like whether the potential targets are friend or foe, missile selection, and racking up points for promotion. Joystick or keyboard, includes ref. card. Fast & fun! -BD

UP PERISCOPE
ActionSoft
122 South Race St. Ste. #4
Urbana, IL 61801

INFO-rated



It's hard to decide whether to compare *Up Periscope* to MicroProse's *Silent Service* or subLOGIC's *Flight Simulator II*. The screen display and animation have the distinct feel of *FS II* (due to the fact that subLOGIC co-developed the product with ActionSoft), but the theme is definitely submarine. Also, the detailed and extensively illustrated historical and instruction manuals are equal to Microprose's best. Now there are two hot sub sims to choose from (you can still forget 8-bit *GATO*) and for once the toss-up is too close for me to call. Highly recommended. -BD

TRAILBLAZER
Mindscape
3444 Dundee Road
Northbrook, IL 60062

INFO-rated



Trailblazer is a new release that boasts, "graphics and sound that push your computer to the limit" Uh, sorry, my C64 wasn't even breathing hard from this arcade-style race game. Here's the gig: you pilot your hyperactive soccer ball along a perspective grid of colored tiles. Different colored tiles speed you up, slow you down, stand in your way, make you bounce, or (when there is no tile) let you drop into the void. Race against time, a friend, or a 'robot' ball, and try to complete various courses in minimum time. Well-executed, but just not much of a game. -BD

the SENTRY
Firebird
PO Box 49
Ramsey, NJ 07446

INFO-rated



Firebird strikes gold again with this totally unique and captivating diversion from the UK. In one of 10,000 solid-modelled landscapes inhabited by trees and boulders, you (a robot) must carefully teleport your way to a high vantage point from which to 'absorb' the SENTRY. The slowly rotating SENTRY, however, is trying to absorb you with its energy-hungry gaze. You strategically create trees and boulders from your energy reserves, then absorb them to replenish your strength. Simple controls and rules belie the addictive complexity of this truly novel game. -BD

PAUL WHITEHEAD
TEACHES CHESS
Enlightenment
1240 Sanchez St.
San Francisco, CA 94114

INFO-rated



Paul Whitehead became a chess master at age 15. At age 26 he has now won a long list of titles, and turned his energies to teaching the game. This program is aimed at absolute beginners to middle level players and includes an extensive set of easy-to-follow on-screen tutorials as well as a separate **Chess Opponent Program** for head-to-head play when you feel ready to take on your computer. The entire tutorial is self-prompting and commands are simple and straightforward. This is an excellent program for anyone wanting to learn, as well as play, chess. -BD

WORLD TOUR GOLF
Electronic Arts
1820 Gateway Drive
San Mateo, CA 94404

INFO-rated

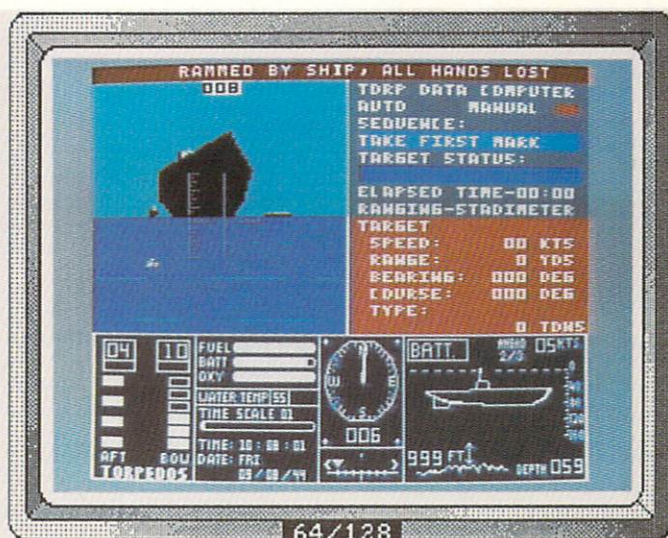


Just what a golf simulation should be. You have 12 courses to choose from, or you can build your own. A split screen shows the golfer's view on the right and an overhead on the left. Nearly all play is joystick controlled, intuitive, and as maddeningly difficult to master as the real thing. There is lots of attention to detail, like an animated player and the ability to change your view and aim. Putting is a little too touchy, and I'd like to see automatic club selection, but there just isn't much else wrong with this game. A sure winner if you're a golf enthusiast. -TM

THE GALLERY



64/128



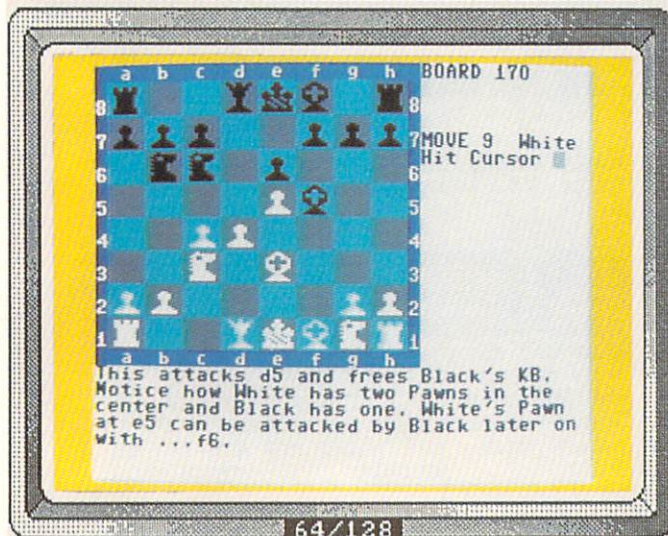
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COMICS

Accolade
20813 Stevens Creek Blvd.
Cupertino, CA 95014

INFO-rated

This is my favorite Accolade title to date, and a refreshing departure from the more usual computer recreation fare.

Comics is an entertaining adventure comic strip which unfolds (with a variety of nice effects) frame at a time across your computer display, but unlike a printed comicbook, Comics is interactive, with many frames animated and responsive to a variety of input from the player (your actions here can affect later events). There are also a number of arcade game sequences which must be played thru in order to complete the story. 3 great double-sided disks! -BD

TRANSFORMERS

Activision
2350 Bayshore Frontage Rd
Mountain View, CA 94043

INFO-rated

Nice animated sequences, a rousing musical score, and a speech-synthesized telling of the Transformers' history on the flip side of the disk highlight this Saturday morning TV theme game. Younger gamers will enjoy dispatching one of 8 familiar robot heros to various trouble spots, watching them transform, and then battling the evil Decepticons in a series of fairly repetitive cross-hair blast-'em scenarios. Repel the baddies and win the game. Game play is just right for younger kids who can read the alphabet, not challenging enough, however, for teens or older. -BD

BUREAUCRACY

Infocom
125 Cambridge Park Dr.
Cambridge MA 02140

INFO-rated

You have moved and must notify your bank, the Fillmore Fiduciary Trust, of your change of address. That is the entire premise of this cynical, aggravating new Infocom adventure. Douglas Adams, father of The Hitchhiker's Guide to the Galaxy, is the twisted genius behind the tangle of red tape you encounter as you try to get your address change processed. Based on Adams' own real-life 6-month ordeal in changing his address at his local bank. One of Infocom's best, and a rare C128-specific game. Includes the bank's helpful pamphlet, *You're Ready To Move!* -MB

FAIRLIGHT

Mindscape
3444 Dundee Road
Northbrook, IL 60062

INFO-rated

Here's a nice little animated dungeon game for the 64 that is surprisingly detailed and involving. A well-done 3D world is maintained throughout a series of connected rooms and levels thru which your character must pass in search of the Book of Light. You encounter many objects and characters, each with their own special properties and behavior. You can pick things up, use them, move them, stack them, feed them, skewer them, etc. Screens are done in hi-res with a single background color that changes from room to room. Well done. -BD

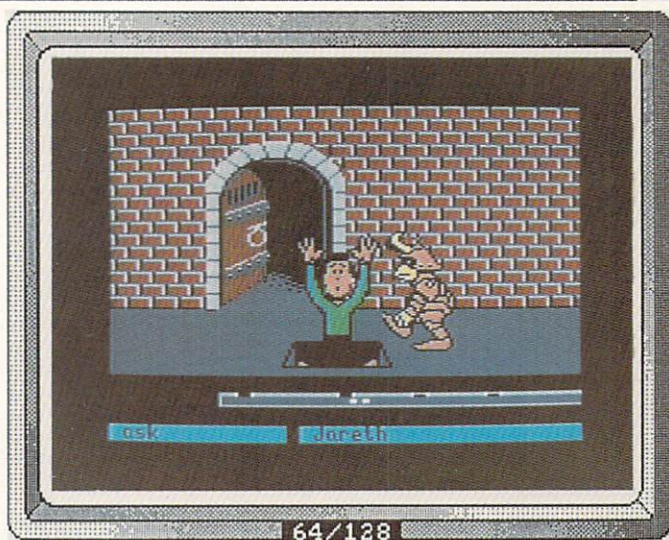
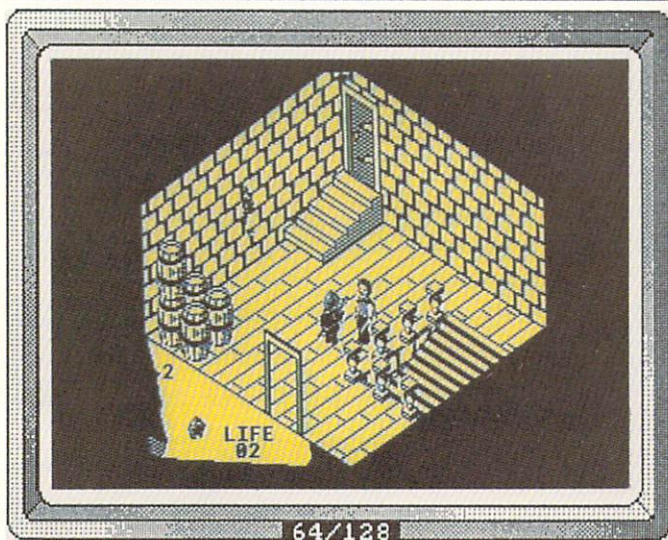
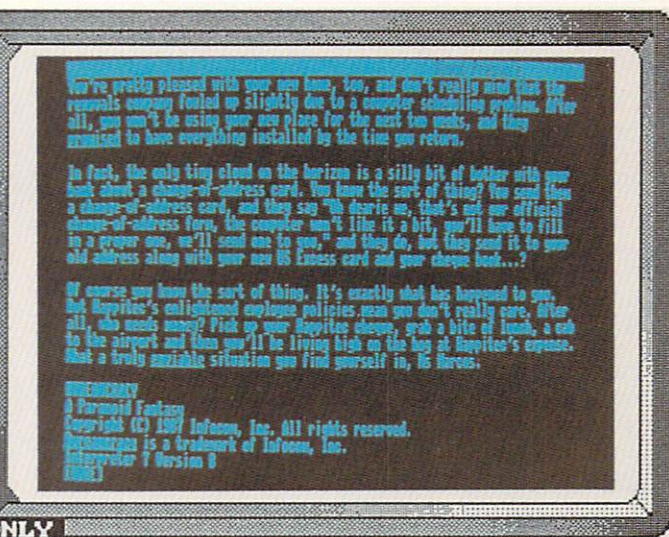
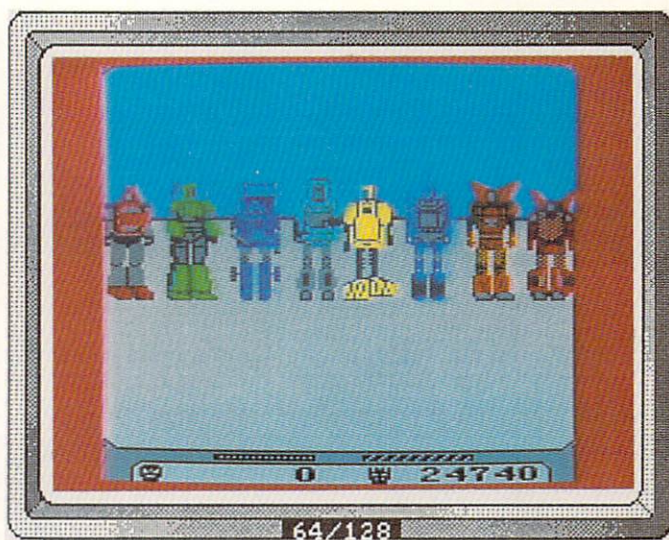
LABYRINTH

Activision
2350 Bayshore Frontage Rd
Mountain View, CA 94043

INFO-rated

Based loosely on the movie by the same name, you start *Labyrinth* in what seems to be just another text-based adventure conundrum. After making the right moves, however, you will find the Goblin King welcoming you into the very graphic world of the Labyrinth. Here your wits and reflexes will come into use as you try to make your way thru a series of brain-teasing mazes and riddles to finally win your freedom from Jareth. The graphics and game-play are nicely done, and there are lots of nice little touches throughout. Recommended. -BD

THE GALLERY



SINBAD
Mindscape
3444 Dundee Rd.
Northbrook, IL 60062

INFO-rated



The Arabian Nights has been brought spectacularly to life for your Amiga. Sinbad incorporates the great graphics and sound I've come to expect from the CinemaWare series. You will encounter jinns, pirates, princesses, and fabled creatures in your quest to remove an evil spell from the Caliph of Damaron. Graphic adventuring is nicely combined with arcade-type sequences and battle simulations, making for exciting and varied play as you go voyaging through the world on your ship. All play is via mouse and joystick, with both required. You won't be disappointed. -TM

CHAMPIONSHIP GOLF
Gamestar/Activision
PO Box 7287
Mountain View, CA 94039

INFO-rated



While this simulation has the best graphics of any of the golf games, the play is so bad that it will put off any golfer. The mouse, which could be and has been used to great advantage in other games, is hardly used at all. The play is very detailed, having you go through four screens before you can actually make your shot. You must go through club selection, stance, club alignment, and a disk access for each shot, making for an extremely tedious game. Only recommended for patient players who don't mind playing golf at a pace usually reserved for chess. TM

S.D.I.
Mindscape
3444 Dundee Road
Northbrook, IL 60062

INFO-rated



S.D.I. is the latest *Cinemaware* title from Mindscape. You are a ruggedly handsome U.S. space ace working with our government and the responsible Soviet leaders to thwart a wreckless coup by renegade KGB loonies who think hurling ICBM's at North American cities is a noble pastime. The Strategic Defense anti-missile satellites are also under attack. Lots of great graphics and better than average game play (along with the *Cinemaware* trademark love scene) make this the best of the series. This could even be the title that causes Reagan to buy and Amiga! -BD

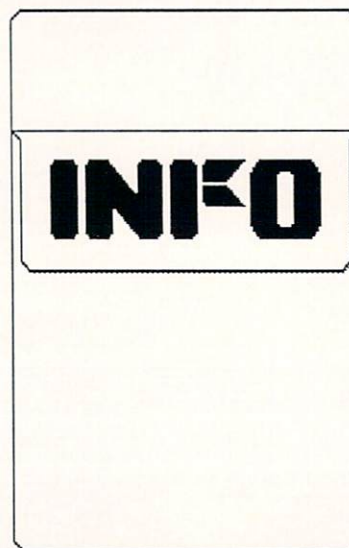
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INFO

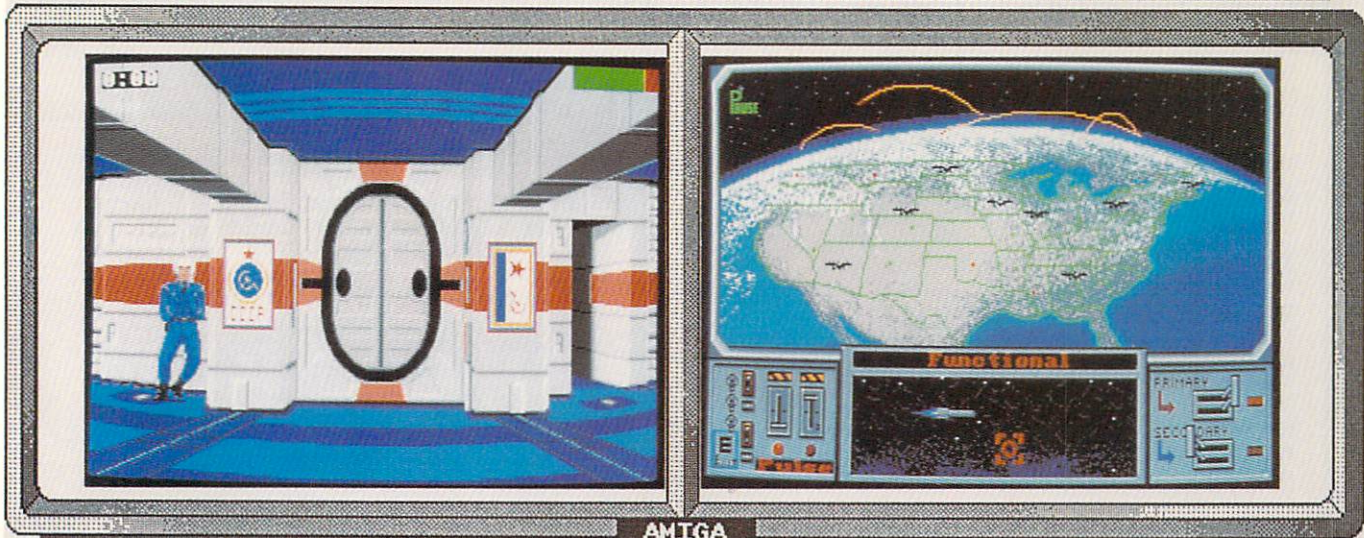
THE GALLERY



AMIGA



AMIGA



AMIGA

FAERY TALE ADVENTURE
Microillusions
17408 Chatsworth St.
Granada Hills, CA 91344

INFO-rated



The folks at Microillusions finally have a MAJOR HIT on their hands: **Faery Tale** is far and away the finest "dungeon" adventure game ever rendered in the microcomputer media! Impeccable and richly detailed animated graphics create an instant fascination, while thoughtful implementation of actions, cause, and effect produce a tangible sense of reality that will have your heart pounding! Over 18,000 smooth-scrolling screens (some hidden) will keep gamers contentedly busy (even the game's designers take a reported 14 hours to win this game!) SUPERB! -BD

DBW.RENDER
\$10 Shareware
by: David B. Wecker
115 Palm Springs Drive
Colorado Springs CO 80908

INFO-rated



Ray-tracing produces the fantastic 3D computer-generated shapes and scenes you see in music videos and sci-fi movies. Before the Amiga, it took a Cray II or a VAX to do it. Commercial Amiga ray-tracing programs are in the works, but for now DBW.Render will let you play with generating 3D HAM (4096-color) still images. You can set and move light sources, point of view, type and texture of objects (from glass to brick), and even produce rippling effects in water. Patience is required; it involves script entry of points and an average picture takes 8-24 hours to generate.-MB

VIDEO VEGAS
Baudville
1001 Medical Park Dr. SE
Grand Rapids, MI 49506

INFO-rated



Four casino games are simulated: video poker, blackjack, slots, and Keno. While the graphics and sound effects are slightly improved over the C64 version (no surprise here), they fall far short of what we expect on the Amiga, and the same functional annoyances remain. Dozens of little things like: in BJ, winnings tally up \$1 at a time (a tedious process when you've won \$200 on a split hand!), and bets must be multiples of 2 (ruling out \$5 bets). The other games have similar shortcomings. There are scores of public domain titles that are more impressive. -BD

SPACE QUEST
Sierra On-line
PO Box 485
Coarsegold CA 93614

INFO-rated



The real star of this cheeky space adventure is the 3D animated movement. You can move in and out among objects on the screen just like in real life; it has a good feel. The adventure itself is nicely put together, with multiple solutions to most problems. The text is highly entertaining, both onscreen and on the game box. The graphics would be excellent by C64 standards, but they sure don't push the Amiga's capabilities. Transitions are slow since each scene loads from disk. Space Quest is a very good 8-bit game ported to the Amiga without 16-bit enhancements. -MB

UNINVITED
Mindscape
3444 Dundee Road
Northbrook, IL 60062

INFO-rated



I have a love/hate relationship with this game. I've been playing it for weeks and still haven't solved it. This is an object-oriented game and the level of detail is nothing short of phenomenal: click on just about anything and you can do something with it. The plot is straight out of a horror movie, taking place in a nastily haunted mansion. There are ghosts, goblins, and other unpleasantnesses to foil as you search for your lost brother. The puzzles are interesting (even though there's one that I swear has no solution) and entertaining. Maybe if I try using the axe on that spider... -TM

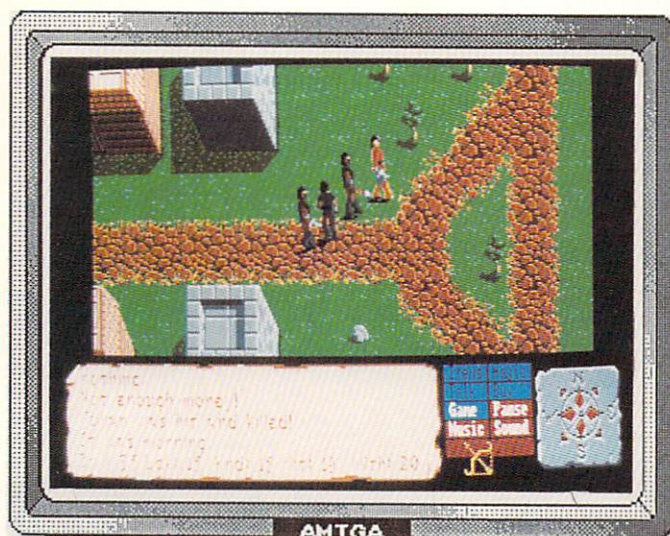
Championship Baseball
Activision
2350 Bayshore Frontage Rd
Mountain View, CA 94043

INFO-rated



Well-executed baseball simulation has all the ingredients for hours of satisfying stadium action. Playing against a human or the computer, you build or pick a team, sharpen your skills in batting practice, and then begin a season of divisional competition (advancing to playoffs) or play more relaxing exhibition games. The joystick controls are not hard to master, and allow a great degree of control over pitching, throwing, and running. The split screen views work very well, and the graphics, while nothing to write home about, are certainly adequate for the job. BD

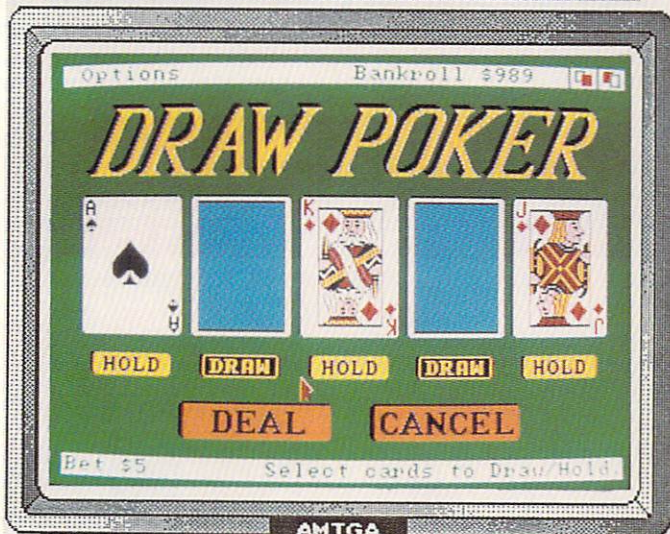
THE GALLERY



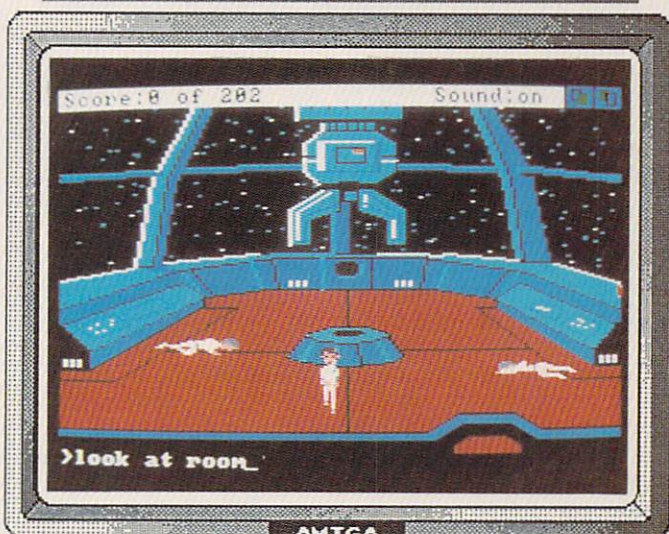
AMIGA



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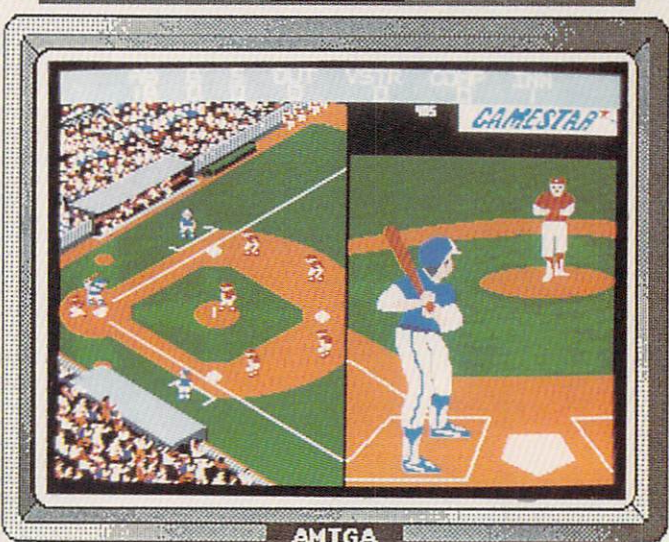
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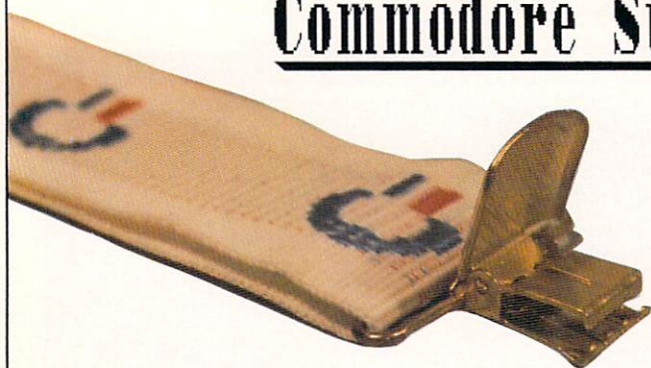
AMIGA

INFO EXCLUSIVE !!

A FIRST LOOK AT THE NEW-

Commodore Suspenders!

Reviewed by
BENN DUNNINGTON,
Editor in Chief



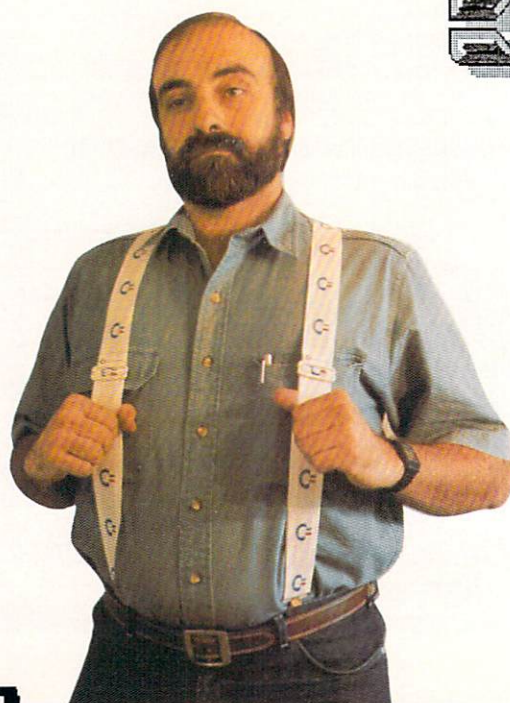
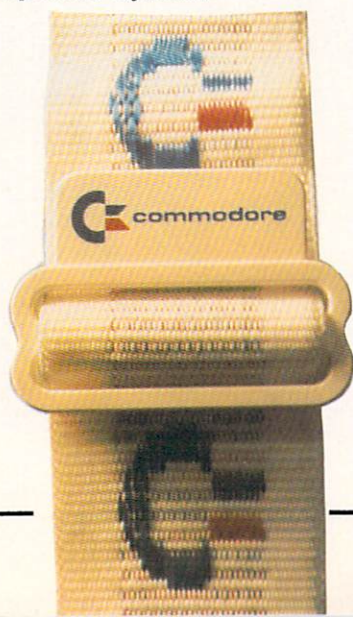
In the old days, INFO used to have a problem getting Commodore's cooperation in acquiring new products for review in our young, struggling publication. Seemed like every time Commodore came out with a new product, they'd call up *RUN*, *COMPUTE!*, *AHOY!*, *AmigaWorld*, *BYTE*, and *Soybean Digest* to arrange Sneak Previews, advance reviews, and photo sessions. We used to get put on a high-priority waiting list, and about 10 months after the item appeared on the shelves of Toys-R-Us (where we would invariably purchase the item) we'd get a friendly call from someone in West Chester cheerfully notifying us that the new product was now available for INFO to review.

Well, all of that has recently changed as Commodore has apparently decided to really get behind INFO and give us their **FULL SUPPORT**.

A while back we received a small package from Commodore (in an obvious effort to avoid ruffling feathers at the other magazines, the package was sent anonymously). Upon examining the contents of the package, and the contents of the last 6 issues of *RUN* and *Soybean Digest*, it quickly became clear that INFO had been chosen, from all the magazines in the country, to break the story on a product so new that even the "grapevine" had not caught wind of it- the Model SX-88 Commodore Suspenders System!

The 88's are professional grade over-shoulder elastic-assisted trouser hoister-levelers. The review unit tested was a Beta 1.2 version, and tho they came without documentation, we had them up and running in under 10 minutes. Calibration was fairly tedious, requiring alternate tensioning of first the left, then the right side. This particular design utilizes a unique "X" configuration (see photo) to prevent side-loading and spontaneous travelling. One feature lacking which I would like to see on future versions is some provision to prevent playful co-workers from fully extending & then releasing the elastic strap mechanisms.

Price had not been set at press time. Delivery is promised by the 5th quarter of 1987.



INFO

INFO Reader Mail

...from page 9

EasyPlex CompuServe
Date: 01-Mar-87 21:14 CST
From: Mike Dedina [74256,3132]
Subj: C64 keyboard

Dear INFO: There is a problem with the C64 (mine at least) which has bothered me for years, but I've never seen anything printed about it. The problem is that spurious characters are generated when a number of keys are held down at the same time. I am a fast but sloppy typist, and this happens to me a lot. Doesn't it bug anyone else? I'm planning on getting an Amiga as soon as possible. I read recently that the new A2000 and A500 (but not the A1000) keyboards have a feature called n-key rollover which eliminates this problem. Is this true?

Yep. N-Key rollover is a very nice feature for any typist, sloppy or not, and the A500 and A2000 do, indeed, incorporate this feature. It's another good reason to consider the newer Amigas. On the other hand, We understand that some programs that use their own keyscan routines are incompatible with the A500 and A2000 for this reason. We know that this has caused a delay in the introduction of StarGlider for the Amiga, since the programmer had to go back to the drawing board to make SG compatible with the new keyboards.

-Mark & Benn

Mail From: PatrickQ QuantumLink
Date: Wednesday 4-Feb-87 22:58 est
Dear INFO:

I tried to type in one of your programs using the instructions from page 59 of issue 12, but was unable to do so. I tried to tap the keys corresponding to the symbols in the listing, but was unable to find a few of them on my Commodore computer (a desktop calculator, to be specific). I then tried to type it on my other keyboard (a Casio CZ-101), but also had some difficulty. It didn't sound very good, either. Incidentally, the listing I was typing was How We Created the Amiga Computer, from issue 13, but I never got it to run (do you guys produce a disk?). Please make your instructions easier for numb brained morons to understand.

Maybe you would have better luck using the ERROR-CHECKER program listed in this issues' C.H.U.M.P. section.

-Mark & Benn

Mail From: PeterO QuantumLink
Date: Saturday 2-May-87 20:55 edt
Received my copy of INFO today. THANKS. Loved the Amiga stuff; give us more on the 2000 and 500. I am lusting after the 2000, as the ultimate micro and the answer to my wife's "When are you going to stop upgrading?" questions. It looks like this one should be as flexible as my wallet and provide features as long as the expansion cards arrive.

We like that comment: "As Flexible As Your Wallet". Maybe that would make a good ad campaign for the A2000...

-Mark & Benn

Mail From: Stevo3 QuantumLink
Date: Sunday 19-Apr-87 01:31 edt

Do you see any serious problems with QLink offering a mass EMail function? They seem to be giving me the world's biggest runaround. They say the system would get bogged down. I don't believe that with all of the available technology they can't do it.

Stevo, we get enough junk mail in real life without having to PAY to read it online, too. Please, for humanitarian reasons, give it up. A weary world thanks you.

-Mark & Benn

EasyPlex CompuServe
Date: 04-Mar-87 20:35 CST
From: Warren Stewart [75206,1033]
Subj: B/Graph

Dear INFO: I have been trying to purchase B/Graph from Commodore for several months, partially due to your review in issue #11. To date, my search has been to no avail. One software dealer told me that the program was never marketed and that in fact it may never have existed. I'm sure that you didn't review a nonexistent program, so where can I find B/Graph or an equivalent?

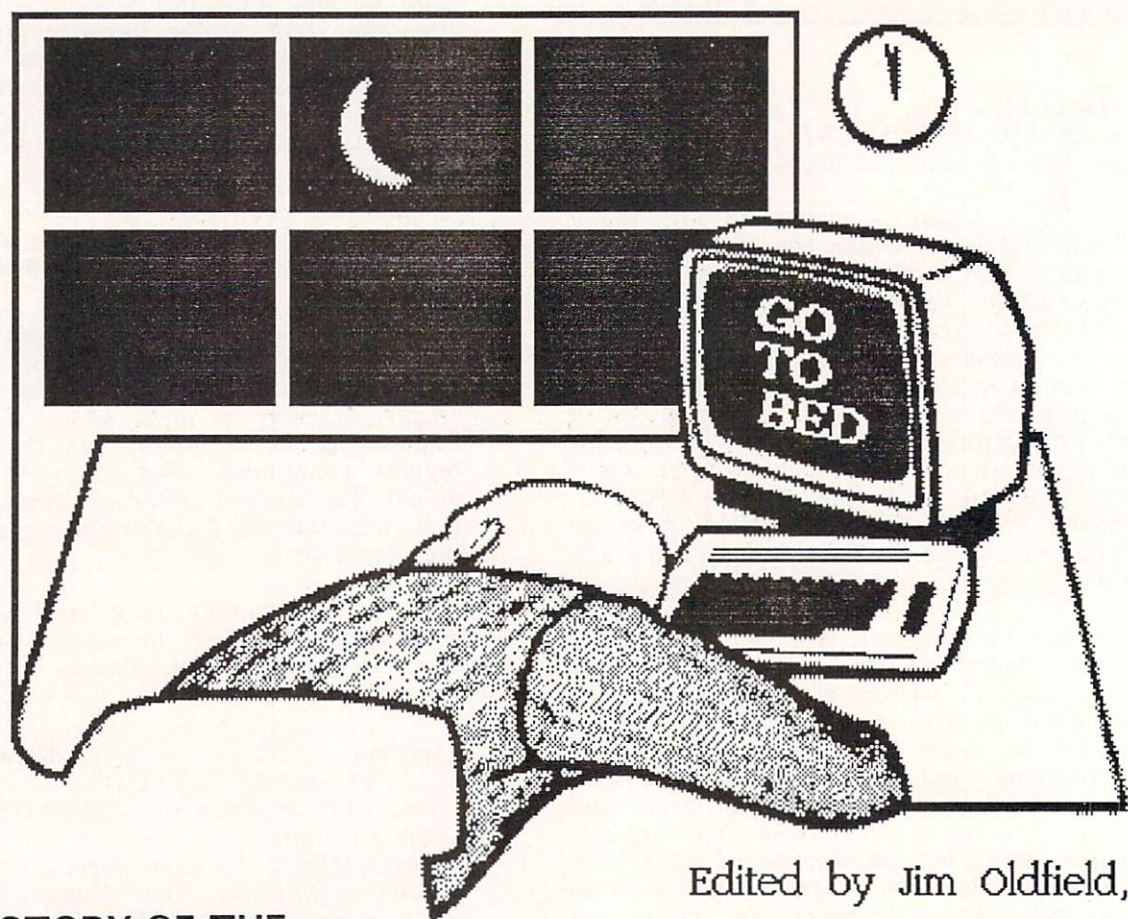
Also keep up the good work with the mag. I read most of the Commodore specific magazines and some that aren't so specific. In my opinion yours provides the most honest reviews and opinions of them all. I may not always agree with you, but your opinions do make me reconsider mine when we differ!

Thanks! We may not always be right, but at least we try, and it's nice to know it means something. As for B/Graph, we did, indeed, review a copy that was in a real box with real documentation and everything! Commodore tells us that they have over 1200 copies of B/Graph ready to ship to dealers at a retail price of \$24.95.

-Mark & Benn

...continued on page 59

Midnite Software Gazette



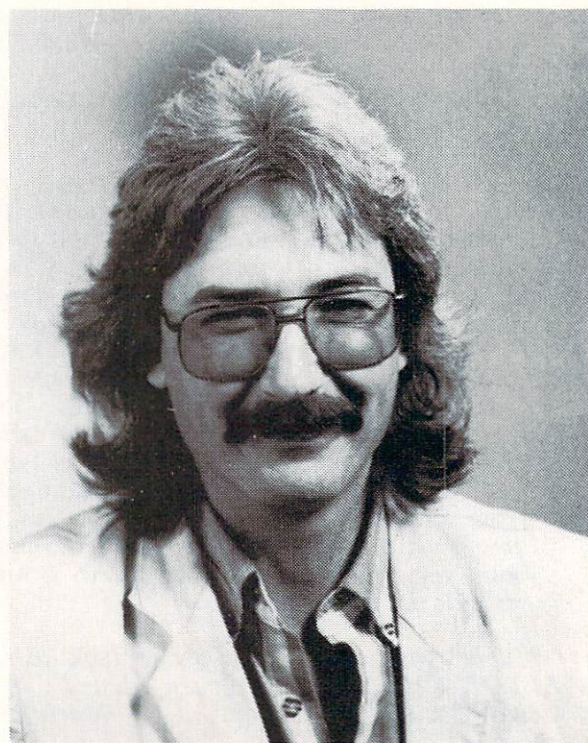
Edited by Jim Oldfield, Jr.

THE HISTORY OF THE MIDNITE SOFTWARE GAZETTE

MY PERSONAL VIEW
By Jim Oldfield, Jr.

ROOTS

Some time in 1976 I began to discover that I was getting a little bored with my routine. Up at 6, off to the factory (I was a fork truck driver--Class A), off work at 3:30, home at 4, supper at 6, TV with family till 10:30; maybe Johnny Carson once in awhile. I needed a challenge--something to get my mind back from the mushy state caused by commercial TV. Anyone who has done repetitive factory work for six-plus years knows the feeling. My 'old car' hobby (I had worked on old cars since I was 16, when my father bought me a '60 Corvair) required more money than I ever saw in a year, especially since antique auto prices had begun to skyrocket. I needed more to occupy myself. After all, everyone needs a hobby--you need a break from it all. Otherwise you end up serious, law abiding, and just plain boring. You end up having conversations with a washrag.



I enjoyed electronics but lacked all the knowledge and skills it required. Back in junior high I even flunked my ham radio license test, which was okay because I couldn't afford a ham radio anyway. I couldn't even replace a light switch in our house without my father's help. Even so, I quickly learned the basics of 110 volts. (All important: black is ground, white is current!) As I had done when I was hobbying in old cars, I began buying *every* hobby electronics magazine I could find.

That year (1976) I was amazed to see on the cover of Popular Electronics a picture of a computer you could build! Until then I'd always had the image of a computer in a large clean white room filled with flashing lights, whirling disks of tapes and white-trousered people doing 'something' with it. But in that issue of Popular Electronics I read about Intel's 8080 microprocessor 'on a chip'.

A computer in your own home! Now *that* was exciting. There was just one small problem: No money. To build one of these things (remember, the electronics wizard here...) the cost was going to run over a thousand dollars. And that was just for the box with switches and light emitting diodes. Video displays, interfaces and storage devices were all beyond my comprehension. Bear in mind, a thousand dollars in '76 bought a family man with two kids (and one on the way) a lot. Like a refrigerator and/or a color TV. Needless to say, the need for food storage far outweighed the need for binary storage. And my only video display was in color and interfaced with our living room couch.

So I began to collect magazines religiously. I bought *every* magazine that even had a hint of information pertaining to 'home' computers. (In those days, people weren't sure what to call those things.) As I began collecting I memorized everything about computers, from binary and hexadecimal counting to displays, interfaces, and tape storage devices (I loved talking about the Kansas City Standard). I even spent time learning a programming language called *Beginners All-purpose Symbolic Instruction Code* (I'm still not sure if that's right; no two magazine authors agreed). In '76 and '77 I bought hundreds of magazines, including the first few issues of *Byte*, *Interface Age*, *Creative Computing* (one of my favorites), and Wayne Green's *Microcomputing*. I even found a few copies of a fledgling newsletter from California called *People's Computer Company* run by a guy named Bob Albrecht (who called himself 'The Dragon'). A year later I was reading *MICRO Magazine*, a newsletter from a large group in Canada called *TPUG*, and Gene Beals' *PET User Group* newsletter. A guy named Len Lindsay had one called *The PET Gazette*. There was an obscure newsletter called *The PET Paper* (which was eventually absorbed into *Midnite*). Its name was quickly changed to

INFO Welcomes Midnite

About a zillion years ago, when the Earth was a primordial swamp and the personal computer industry was just getting off the ground, a few hearty pioneers undertook the monumental task of collecting and disseminating useful, honest information to computer users. Among the first to do so for the Commodore computing community were Jim Oldfield, Jr., and the Rev. James Strasma, the founding fathers of *The Midnite Software Gazette*, *The First Independent U.S. Magazine for Users of Commodore Brand Computers*. Over its nine-year, 41-issue history, *The Midnite* was one of the most respected publications in Commodoredom. But, alas, times change. Strasma left *The Midnite* a couple of years back to pursue other things (though his *Commodore Clinic* column remains one of the best continuing features in *Run* magazine). Now Jim Oldfield finds more and more of his time being demanded in other areas of the computing industry. With the increased demands on Jim's resources, *The Midnite* was faced with the possibility of its demise. We couldn't let that happen. We are glad to be welcoming *The Midnite* into the pages of *INFO*. You'll be seeing many of *The Midnite's* regular reviewers writing for *INFO* in future issues, and Jim Oldfield will continue to supply the informed, articulate, and sometimes downright testy editorial voice of *The Midnite* in this regular column. While we are sad to see *The Midnite* cease publication, we are happy to have it survive as an autonomous part of *INFO*. Welcome aboard, Jim. And welcome to *INFO*, *Midnite* readers. We hope you'll feel right at home.

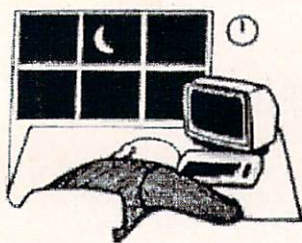
-Mark & Benn

Jim Oldfield, Jr., is Vice-President of Micro-Pace Computers, Inc., Director of Midnite Press, a consultant for Constellation Software, and a Commodore Guru, first class. You can reach him online at these EMail addresses:

CompuServe--76703,4033

QLink--Midnite

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The PAPER because Commodore's complained about the use of the word "PET" in the title. But I'm getting ahead of myself... Spending the bucks on all those computer magazines left little in savings for a real computer. But I was happy (and very hungry) to learn about them any way I could.

In the summer of '77 a 'new' company called Commodore (they had been in business selling office furniture, typewriters and calculators for years) unveiled a computer for the home called the PET, which stood for Personal Electronic Transactor (yes, sharp-eyed readers: Transactor).

I read about all of its virtues and memorized each one. I felt then that this was the one I wanted. At the time I had only a few choices. There were a few lesser-known computer manufacturers available, like SouthWest Technical Products (SWTP), Ohio Scientific, and Digital Group. There were also a couple more that are still around.

The Apple II was nice with its 'sound' and color graphics, but the prices quoted at the time were far beyond the means of mortal men. Tandy/Radio Shack had their Model I but it just didn't *look* like a computer, especially with all those wires and things dangling around, and that expansion interface you sat the monitor on.

I figured if I was going to spend all my extra money, I wanted something impressive looking. The PET had it all: A built-in black and white monitor, an (unconventional) keyboard, a cassette player, and the whole thing was enclosed in a white *metal* case. (You historians out there will remember just how important that little cassette drive was--until CBM, *all* other computers had to use their own unreliable data transfer protocol. To this day, the PET cassette has proved a *very* reliable, if slow, method of storage)

After finally waiting months for the PET, it arrived in 1978. There on my kitchen table sat a *real* computer! Although no manual or literature came with it (well, there *was* a warranty card enclosed), it was complete. (Since CBM didn't put instructions in with anybody's PET, PET owners had a common problem to solve: What to do with the beast? It spawned a camaraderie that still persists within many Commodore user groups.)

The most-asked question I got from my relatives who saw it (and especially my wife) was "What are you going to do with it? And why in heaven's name did you spend *all* of your vacation check on this machine?" Like all of us 'old-timers', I had the standard answers:

I could do my checkbook. Great reason--it lasted about a week. (I *still* do it by hand. The old dedicated calculator works better).

I could learn to program, even though this I had already accomplished to some degree with the computer books and magazines I'd bought before. Besides, *no* manuals came with the computer, and even if they had you couldn't realistically get very far careerwise trying to use the BASIC language in a business environment dominated by big IBM mainframes.

I could keep track of my stocks and use it in forecasting them, but since I'd spent all my money on the computer to do it...well, there just wasn't any money left to buy stocks.

I could use the computer for entertainment. Ah! The truth will out!

As many of my closest friends and relatives can attest, I love playing games: board games, card games, logic games, *any* game that's a challenge to master. Here, in my own little box, was a thing that would play games just as long as I wanted. My wife Debbie just didn't have the time to sit and play these types of games with me, and the kids were too young. I was in hog heaven. An interactive device had been invented that would play with me for as long as I wanted and play as well as someone could program it to. If I lost...well, I just changed a bit of code and eureka, I could play some more and win, too!

But that didn't last long. I wanted *more* games, *more* programs to play and learn. I began contacting people via ads and reviews from **The PET Gazette** and others.

In those days, anybody with a knowledge of BASIC could write and sell a 'commercial' program for the PET. There were a few programs around (though not nearly the quantity and quality available for other machines) but it was tough to find *good* ones worth the asking prices. There was quite a bit of confusion and a lot of misinformation regarding programs available. That's why Lindsay's **Gazette** meant so much to users like me. Len *always* warned people not to buy programs sight unseen. If it wasn't reviewed in **The PET Gazette** or another reliable newsletter/magazine, Lindsay advised you to wait to purchase it.

About that same time I somehow found a guy in Danville (a town 75 miles away from my home town) and called him in hopes of getting PET information, or maybe even joining his user group. As luck would have it, he was packing his things and moving to the West Coast somewhere. But he had gotten another call not too long before from a guy who also had a PET, right in my own town! I couldn't believe it. I found out he was a Methodist minister and his name was Jim Strasma. I called and, shortly after, we met and began a long and (still) close friendship based on a common area of interest: learning about our PET computers.

THE SEEDS OF THE MIDNITE

After Robert Lock acquired The PET Gazette and changed its name to **COMPUTE.**, the magazine expanded and became a large and very successful magazine for all 6502 microprocessor owners. Apple and Atari, as well as single board computers such as the KIM, SIM, AIM, and others were all covered in **COMPUTE!**. But Strasma and I missed the reviews we had been accustomed to reading in The PET Gazette. An idea was formulating. Having read and worked a bit with Len, Strasma and I felt there was still a need for a 'review only' magazine. We decided to start a user group, mainly with the hope that others would work with us on this project. Well, we became the smallest user group ever, with a membership of two. Actually, Jim's wife Ellen and my wife Debbie were members, but they didn't get vigorously involved until later. At the beginning, we decided to write short, concise reviews of programs that we had on hand...and we had a lot! Between Jim's m/l-related programs (which included monitors, assemblers, wordprocessors, and what I considered all the 'serious' aspects of computing) and all my game programs we owned a large share of the tiny PET computer software market. Some of our earliest reviews were so short that they didn't amount to more than a short paragraph. But they did do something that neither Jim or I noticed at the time: we suddenly had a forum for reviews that would extend way beyond our modest expectations.

The name Midnite Software Gazette has lots of importance to Jim and me. Firstly, the misspelling of "Midnight" was done on purpose; we didn't want to be confused with anyone else using the word. Midnite, to us, simply was the hour that we saw on a daily basis. The 'late shift' was the hours we spent working on our PETs. We had grown accustomed to getting off our regular jobs, eating supper, playing and interacting with our respective families, and then later, after everyone was in bed, computing to our hearts content. It wasn't unusual for me to sleep from 3 to 5 a.m. and go right back at it before I had to leave for my 'real' job. One of my favorite questions I get asked when I speak to user groups is "How did you learn all this?" Quite simply, by the brute force of love. I loved playing and tinkering with that digital device that would upon command interact with me. I'm not saying I fell in love with a machine, though my beautiful wife accused me of that at times. It was just the sheer pleasure of creating something that I truly enjoyed.

.....to be continued.



[Watch for more of Jim's nostalgic ramblings in the next issue of INFO. --ED.]

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Here's what we've found interesting in the computer magazines so far in 1987:

Midnite Software Gazette

Oldfield's last few issues of The Midnite Software Gazette contain the usual batch of software review gems. Issue #38 includes reports on the London Commodore Show, the World of Commodore Show in Toronto, and Winter CES in Las Vegas. In #39 Tim Sickbert had a really devious April Fools editorial concerning Commodore's future plans...it hooked us! We haven't seen the last issue (#41) of Midnite yet, but we understand it includes goodbye editorials from everyone (including Jim's wife Debbie!), Midnite's landmark 2000th review (!), and reprints the first issue of Midnite in its entirety. It's sure to be a collector's item.

The Transactor

The topics of the first four 1987 issues of The Transactor have been Gizmos and Gadgets, More Languages, Simulations & Modeling, and Math. It's all great hardware and programming information, as usual, with the program listings all in BASIC or assembly language so they make sense. The big news from the Transactor is that Editor Karl Hildon and staff have bought the magazine from its parent company and have stopped all newsstand sales. Since the Transactor will be subscription-only until further notice, and since it is so indispensable to Commodore users, here's subscription info: send \$15 for 6 bimonthly issues to The Transactor, PO Box 338 Station 'C', Buffalo NY 14209, 416-737-2786.

commodore

Commodore Magazine has held on pretty well in 1987. Every issue has had several type-in programs in informative, educational BASIC. I still like Louis Sanders' Tips & Tricks column better than Run's Magic (which Sanders used to do for them). The quarterly Amiga Buyer's Guide was a removable insert in the March issue, and wasn't anywhere in sight in the June issue. (Has it been done away with?) The May issue featured an interview with Tom Rattigan (with Rattigan's smiling face looming from the cover) and hit the stands just before Rattigan was fired. What great timing! Also, Commodore Magazine was the last magazine to report on the new Amiga computers, in their June issue. Odd.

Ahoy!

Dear Ahoy!: We're glad you tried, but in spite of the note to us in your June "View From The Bridge" editorial, you missed our point about BASIC type-in programs. The idea is that nobody can learn anything from a hexadecimal or BASIC

loader type-in listing. To be really useful, your programs should be all BASIC or all assembly-language (like in your Rupert Report column). Then the code can be read and people can learn from it. Even though you claim in the June issue that most of the programs are in BASIC, just a cursory glance shows that many of them are BASIC loaders full of DATA statements, or are half-BASIC, half-m/1 half-breeds. These are even worse than hex listings, because they look like they might be understandable, then they hide all the real secrets in DATA statements. But it's a problem all the computer magazines with type-in programs share (except the Transactor). It's not unique to Ahoy! Anyway, Ahoy!'s Morton Kevelson takes a look at the A2000 in the April issue, and a regular COMAL column by Richard Herring debuts in that issue, too. If you are interested in programming, check out the Rupert Report in every Ahoy!



The January Run had an interesting look at software piracy, with input from users groups and software publishers alike. There's a handy article on defining functions in BASIC for things like unit conversions, arc-trigonometric functions and common logs in the February issue that might get you started into using the DEF FN(X) functions. The April issue had a great hands-on look at 8-bit hard drives by Jim Oldfield. Then Run ran into the same 'embarrassing interview' problem that Commodore magazine did. The cover title of the May Run proclaimed "Commodore Exec Predicts Bright Future" and included an interview with Nigel Shepherd. Just as the issue hit the stands, Shepherd was sacked by Commodore. I guess his future wasn't as bright as Run had reported.

COMPUTE!'S GAZETTE

Ken Arbuckle passes along some interesting tips for using CP/M on the C128 in 40-column mode in the January issue of COMPUTE!'s Gazette. MetaBASIC is re-milked in the February issue. The interminable Turbo series gets a SAVE sibling in the April Gazette. Four SpeedScript-related programs (including version 3.2 of SS itself) take up a good hunk of the May CG. There is an interesting history of Commodore BASIC by Ted Helmark in the June Gazette, though, and to mark the 10th anniversary of the introduction of the first Commodore personal computer, Richard Mansfield takes a very nice nostalgic look back at his first PET computer.

COMPUTE!

AmigaBASIC type-in games are a rare thing, and that's the only thing we've found interesting in COMPUTE! this year to date. Every issue so far has included at least one type-in game for the Amiga in AmigaBASIC. If that is worth the \$3 cover price to you, by all means buy it.

ROBO CITY NEWS

FIRST AMIGA USERS GROUP

Robo City News, the newsmagazine of the First Amiga User Group, just keeps getting better. FAUG often gets preview demonstrations of new products at their meetings, and reports in Robo City are often the first press coverage of a new Amiga product. (They had the Juggler demo on their cover in full color in Jan/Feb, four months before AmigaWorld!) It's humorous, it's honest, and it's irregular. This is the best of the Amiga users group publications, bar none. \$18/year from: FAUG, 543 Old County Rd., San Carlos CA 94070.

Amazing Computing™

We finally subscribed to Amazing Computing so we'd be sure to get our issues...Don Hicks is so busy he's been forgetting to send them to us, and we don't want to miss any issues! Our first subscription copy, V2/#5 (Don doesn't date them), does a super job of reviewing sound digitization on the Amiga honestly, with tips on using sampled sounds in AmigaBASIC.

AMIGA WORLD

January/February marked the very first completely computer-generated AmigaWorld cover (which looked like a simulated paint program screen overlaid on a digitized color photo of David Letterman). It's about time! The issue focuses on Desktop Video. The Mar/Apr issue had a very detailed look at the A2000 with some good technical information. AW looked at the A500 in May/June, and also had a roundup of memory expanders.

FAMILY COMPUTING

If you're thinking of buying a used computer, the May issue of Family Computing had an article that might help you out; it even included a price list for used computers. It made me think of the 'Street Price Index' that Creative Computing used to print. But if you're thinking about buying their 1987 Annual Shopping Guide, we have to warn you that for \$3.95 it only lists 118 programs for the C64, 4 for the C128, and 39 for the Amiga. (INFO's Product RoundUp issue #14 listed 2200+ products for Commodore computers for the same price...)

BYTE

Byte continues their ongoing commitment to 68000 coverage with a review of the Atari 1040ST, a build-it-yourself 256K internal RAM expansion project for the Amiga, and a look at Amiga PD software by Warren Block in the February issue. March had Bruce Webster's report on the Amiga Developer's Conference, plus Byte's product preview of the A2000, which remains the best technical look at that machine to date. There's a product preview of the Macintosh II in April, plus an

excellent and comprehensive roundup of 53 dot-matrix printers. The May issue focuses on Desktop Publishing, and also includes a review of (of all things) the Commodore C64C, written by the author of the BIX system, Alastair J.W. Mayer.

COMPUTER SHOPPER®

Ted Drude has joined the staff of Computer Shopper full-time now, so look for more Commodore information from them. The ST side of the Amiga-vs-ST debate ran in the January issue. There's an installment of Stan Veit's History of Computing in Feb., and Commodore's PC-10 made the cover in March. Round 3 of Amiga-vs-ST (Amiga side again) is in the April issue, and they (finally!) look at the A2000 and A500 in May. The Shopper launched a new magazine in late April called PC Clones, and some buyers got more than they bargained for. Besides the free disk full of MS/DOS utility programs included for the \$3.95 cover price, some copies of the magazine contained nude photos from Playboy! It seems the binder mistakenly bound pages from Playboy into some copies. The story got out on the AP wire and was printed in many newspapers, and, in the words of a Shopper staffer, "We sold a lot of magazines".

MONEY MACHINE

The second issue of Money Machine looked better than the first, with better quality paper and more original information...LOTS of productivity software reviews. If you want to make money with your Commodore computer, check out a sample issue. \$3.95 (and maybe some postage). Call Don Vandeventer at 904-622-1022.

MISCELLANEOUS

Miscellaneous: There's a good article on parallel processing in the February issue of High Technology. The May issue of Radio Electronics has the theme of "Electronics in the Next Century", with articles by Arthur C. Clarke, Isaac Asimov, and others projecting what computers and electronics will be like in 2001. It's good reading. There's a new slick magazine covering telecommunications called Online Access Guide. It looks good, and I like the witty, honest style, but I'm not sure there's \$4.95 worth of information in each issue. If you like games, Computer Entertainer is a five-year-old newsletter that keeps on the cutting edge of new games for all computers. Each monthly issue is a thin 14 or so pages for \$3.50, but they do a great job of keeping current, and even publish a list of game availability dates. \$25/yr. Call 800-228-4336 to subscribe. Women Computing is written by women for women who want to gain a better understanding of computers. The style is chatty and the concept is interesting. The first issue ran 12 pages and included info on users groups for women, a review of The Women's Computer Literacy Handbook, a first-time user's own story, a glossary of terms, and more. \$36/12 issues from: Women Computing, 2917 Upas St., San Diego CA 92104.

Other magazines you shouldn't miss: Computer Language and Software Tools (formerly Dr. Dobbs Journal) for programmers of any kind; Ami Project for Amiga programmers; COMAL Today for COMAL users; and MacUser if you're into witty, honest, good-looking magazines and don't care that they cover the Macintosh instead of Commodore.



COMMODORE SHAKEUP

As most of you know by now, Tom Rattigan resigned as President of Commodore International Ltd. on April 16th. The stories surrounding his ouster are confused, to say the least, but here is the whole story as we have pieced it together:

Rattigan called a special meeting of Commodore's board of directors on April 14 that culminated what the *Wall Street Journal* called "a high-stakes power struggle". A source close to Commodore told INFO "Gould and Rattigan just came to a head-to-head fight as to who was going to run the company, much like Sculley and Jobs [at Apple Computer]."

It's been widely reported that Rattigan had been concerned because Commodore Chairman Irving Gould, a 25-year Commodore veteran who owns 19% of Commodore stock, had been taking a much more active role in the daily operations of the company in the last year. Rattigan alleges that Gould even hired and fired senior management officials without consulting with him.

At the board meeting, however, Rattigan apparently did not get the support from the board that he had expected. A source close to Commodore was quoted in the *Wall St. Journal* as saying, "He underestimated the old man's strength".

Two days later Rattigan was suspended pending a second board meeting to discuss his termination. When he entered his office to clean out his desk on April 20, he was forcibly removed from the premises by two guards. At

that point, Rattigan resigned. On April 22, he filed a \$9 million lawsuit against Commodore charging that his executive authority had been undermined and he had had to tender an "involuntary resignation".

According to one source, Rattigan's five-year contract with Commodore, awarded by the board only last year, involved 500,000 shares of Commodore stock worth about \$5,000,000 plus the equivalent of \$1,000,000 a year in salary.

Numerous sources have stated that there was an apparent personality conflict between Gould and Rattigan for some time. Gould was reportedly dissatisfied as early as last November that Rattigan was not pursuing the marketing of the Amiga more aggressively. One industry analyst was quoted as saying that Gould was miffed by Rattigan's high-profile image, including the interview in *Commodore Magazine*, which included 19 pictures of Rattigan.

Gould has stepped in as CEO of Commodore, and has said that he will remain there for the foreseeable future. CBM is not actively seeking a replacement for Rattigan. His stated goal is more aggressive promotion and marketing of the Amiga. "We demand action in the U.S. market," Gould told an INFO source.

In the wake of Rattigan's departure, over 50 of Commodore's management staff have been fired, most apparently on the advisement of Commodore's financial consultants Dillon Read & Co. Some Commodore insiders have publicly stated that it was not Tom Rattigan, but the sound advice of Dillon Read investment bankers (consultants that Irving Gould brought aboard in 1986 at the depth of Commodore's financial troubles) that has turned Commodore around financially.

Among those to lose their jobs along with Rattigan are Nigel Shepherd, former General Manager of Commodore U.S., as well as the company's chief financial officer, controller, treasurer, and computer systems director. Gould has said that he may shift more administrative staffers into sales and marketing positions. The firings and reshufflings are meant to mold the U.S. operation into a force similar to Commodore's highly successful European division.

Gould has brought in some new key management personnel from outside Commodore U.S. Directly under Gould is Alfred Duncan, formerly of Commodore Canada and most recently President of Victor, who will take over Shepherd's job as General Manager of Commodore U.S. Paul McIntyre, also from

Commodore Canada, will fill the newly-created post of U.S. Sales Manager. Both are said to be interested in "driving sales" of the Commodore Amiga.

Unlike mass firings in the past, the mood inside Commodore this time seems to be very optimistic. The staffers we've talked to are excited to see the push for distribution and marketing of the Amiga, a change that almost everyone believes is long overdue. Commodore employees seem enthused to have Gould and Duncan at the helm. From the new activity we are beginning to see already at Commodore, you should see changes in the way Commodore markets and distributes their computers very soon.

C128 & 1571 ROMS AVAILABLE

We reported last issue that Commodore was close to releasing new ROMs for the 1571 disk drive and the Commodore 128. The new chips fix several bugs in the C128 and 1571 operating systems. The latest word we have is that they are now available in limited quantities directly from Commodore Service. The 1571 ROM chip is \$9.95 including postage, and the 3-chip C128 upgrade ROM chipset is \$24.95, postpaid, from: Commodore Service, 1200 Wilson Dr., West Chester PA 19380, Attn: ROM Upgrades. Some dealers also have gotten the ROMs in, so check with your local Commodore dealer first.

MORE AMIGA COIN-OP GAMES

As we mentioned last issue, Bally has licensed Amiga technology for use in their coin-op videogames. Besides the previously announced *Moonquake*, Bally now says they will be producing Amiga-tech arcade versions of *Boulder Dash*, *Road Wars* and *Firelord*. Since Commodore's agreement with Bally includes the right to produce home versions of Bally's coin-op games, look for Amiga versions of these arcade titles in the near future.

CBM recently licensed Amiga technology to two more video arcade game manufacturers. Grand Products will be using Amiga boards for a submarine combat game called *UpScope*, and Mastertronic will be incorporating Amiga boards into their Arcadia game line. We assume that CBM has the same home-version agreement with these companies that they have with Bally.

The technical staff at Commodore tells us that the new arcade machines will essentially be standard Amigas with ROM game 'cartridges' built-in. Except for the incorporation of professional monitors and controllers, the units are said to be identical electronically to home Amigas. This marks a definite first in the electronic gaming industry: coin-op manufacturers coming to a personal computer company for the latest in gaming technology!

It's a real testimony to the developers of the Amiga, and to the capabilities they built into this machine. (After all, you don't see coin-op games built around an Apple IIGS, Macintosh, IBM-PC, or Atari ST!)

ATARI LAWSUIT SETTLEMENT

As you may or may not know, Jack Tramiel and Atari have tried since before the Amiga's introduction to show that Atari had a prior claim to the Amiga computer. Atari filed suit three years ago, claiming prior rights to the Amiga. In late March, Commodore and Atari finally reached an out-of-court settlement. Though the final agreement is top-secret, Commodore is said to have had to pay Atari "a couple of million" dollars in order to have the suit dropped. According to one source inside Commodore, "the amount of the settlement was far less than what we had spent on attorneys already." Though it's too bad that Atari profited from the deal, the settlement brings two definite plusses to Commodore: (1) Jack Tramiel's dealings with Commodore finally and irrevocably end, and (2) Atari has proven by their tenacity that they know which is the superior computer.

AMIGAWORLD EXPO

AmigaWorld is putting on an Amiga-only computer show in San Francisco to be called AmigaWorld Expo. The show, which will be coordinated by the same folks who do the highly successful MacWorld Expo, will be held at San Francisco's massive Brooks Hall the weekend of September 11-13. Call 617-329-8334 for more information.

RAYTRACING PROGRAM

Byte-by-Byte is working with Eric Graham, the author of the famous public domain Amiga *Juggler* demo, to develop a fast commercial raytracing program. They should be demonstrating the project at the June COMDEX show. They hope to be able to offer the Draw portion of the package for \$99, with the animation portion for an additional \$99.

MARCA SHOW

MARCA will be holding their fourth annual Commodore computer show the weekend of June 19-21. This Philadelphia-area show will be held at the Betsy Ross Inn in Pensauken NJ (a suburb of Philly) and will feature lots of exhibits, speakers, and Commodore fans. Call Martha Young at 304-263-8264 for details.

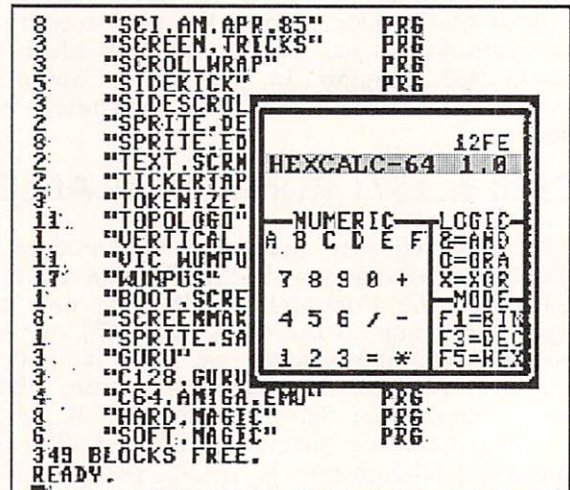
...continued on page 69

HEXCALC 64

Hexcalc 64 is a popup programmer's hexadecimal/decimal/binary conversion calculator for the C64. It performs standard arithmetic and full logic functions. The program resides quietly in the background and can be popped into view when needed. It is also mobile, allowing you to conveniently view parts of the screen that might otherwise be hidden by its appearance. \$14.95+\$2.00 shpg. from: Bill Sharp Computing, PO Box 7533, Waco TX 76714, 817-776-2958.

C128 BASIC 8

In last issue's Rumor Mill we mentioned WALRUS, the BASIC 8.0 ROMs for the C128. Well, it turns out that there really is such a beast, though it will initially be a disk-loaded product and not an internal ROM. BASIC 8.0 adds many new commands to the C128, including 80-column hires graphics. It will be available from Computer Mart for \$39.95 at 206-695-1393. For more information on BASIC 8.0 itself, contact: PATECH SOFTWARE INC., P.O. BOX 5208, Somerset NJ 08873



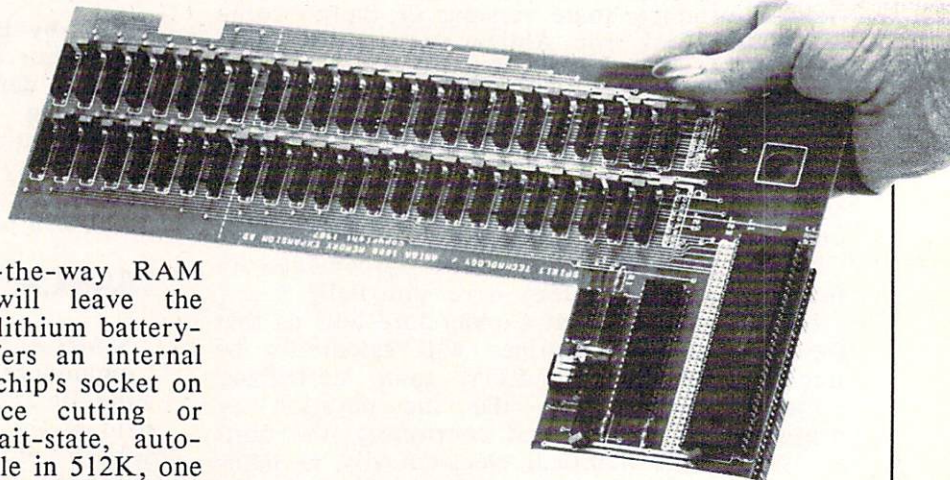
Hexcalc for the C64.

DIABLO FOR C64

We loved DIABLO on the Amiga, and now it's available for the C64. This is one of the best mouse games we've ever seen, and we're curious to see how it translates to the C64. The graphics and sound should be easily translatable, but we really want to see if it's as addictive with a joystick as it is with a mouse. \$24.95 from: Classic Image, 510 Rhode Island Ave., Cherry Hill NJ 08002 609-667-2526

INTERNAL AMIGA RAM EXPANSION

If you want neat, clean, out-of-the-way RAM expansion for your A1000 that will leave the expansion buss free, and also need a lithium battery-backed clock, Spirit Technology offers an internal plug-in board that sits in the 68000 chip's socket on the Amiga motherboard. No trace cutting or soldering required. It's all zero-wait-state, auto-config RAM, and the board is available in 512K, one meg, and 1.5 meg populations for \$349.95, \$499.50, and \$599.50 respectively. From Spirit Technology, 220 West 2950 South, Salt Lake City UT 84115 (800)-433-7572



INFO BOOKS

We've been asked more than once if we are associated in any way with Info Books. The answer is "Nope." Now that that question has been answered, you may have others that you've been wanting to ask. Questions such as: *What is the meaning of life?* or *Why do I exist?* or *How can I debug a program that locks the keyboard?* Well, these and many other questions of eternal and short-term temporal significance are answered in **The Tao of Programming**, an INFO Books book by Geoffrey James. It is filled with such gems of wisdom as this: *Each language has its purpose, however humble. Each language expresses the yin and yang of software. Each language has its place within the Tao. But do not program in Cobol if you can avoid it.*

Though the book has a somewhat big-corporation data-processing-environment flavor to it, there are many gems even for the microcomputer user. No serious (or not-so-serious) programmer should be without a copy. \$7.95 from: Info Books, PO Box 1018, Santa Monica CA 90406, 213-470-6786.

COMMODORE CHIPS

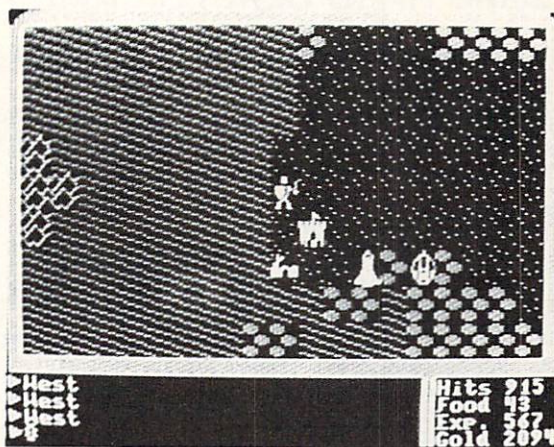
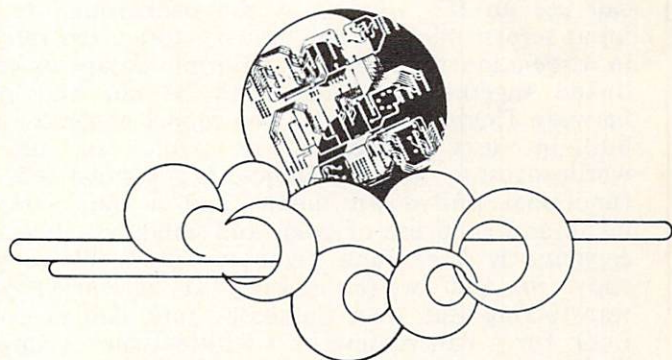
For those of you who have been wondering just where to get the latest revision chips for your computers and drives, we understand that K. Boufal, long the best source of CBM replacement chips, has just gotten in a shipment of the new Hi-Fi version of the C64 SID chip. The company is apparently also first in line for the new 1571 and C128 ROMs, just as soon as they become available. For more INFO, contact: K.Boufal/Consulting Services, 244 Fitzwater St., Philadelphia PA 19147 (215)-925-6469.

NEW, IMPROVED ULTIMA I

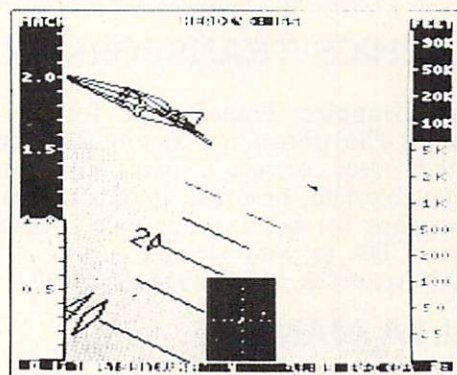
Electronic Arts and Lord British have released a new version of the classic fantasy role-playing game, Ultima I. The new version features improved graphics and faster gameplay. \$39.95 for the C64, from: Electronic Arts, 1820 Gateway Ave., San Mateo CA 94404, 415-571-7171.

NEW JET 2.0

It's unusual to see companies upgrading game software, but this must be the season for it. Besides EA's upgrade of Ultima I, this month saw subLogic upgrading the C64 version of Jet to v2.0. The new Jet offers several improvements, including nearly twice the speed of the original. In addition, you can now change scenery disks in mid-flight, switch to a wire-frame display mode, turn off scenery altogether, and select the sound effects you want. From: subLogic, 713 Edgebrook Dr., Champaign IL 61820, 217-359-8482.



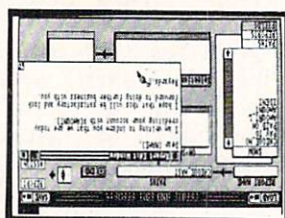
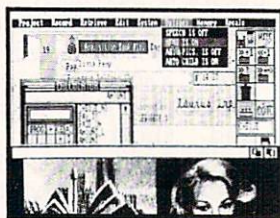
New, Improved Ultima I for the C64.



New, Improved Jet 2.0 for the C64.

ACQUISITION

This British database manager for the Amiga shows a lot of promise. It's programmable, with over 200 commands. Screen layout is very flexible, and you can use an IFF picture as the background to your input screen. Pictures can also be stored and retrieved in association with records. Multiple databases can be linked together, and data can be cut and pasted between fields or records. The report generator has a built-in text processor, or you can use the wordprocessor of your choice. It's Amigatized, with functional pull-down menus and a quick-selection menu and good use of color and windows. Its claimed capacity is *huge* (one gigabyte files?) We've got a copy in and we're looking at it seriously for transferring our own databases into Amiga format. Look for a full review in a future issue. Acquisition is from Taurus/Impex Ltd., and is distributed in the U.S. by Haitex Resources, 208 Carrollton Park, Suite 1207, Carrollton TX 75006, 214-241-8030.



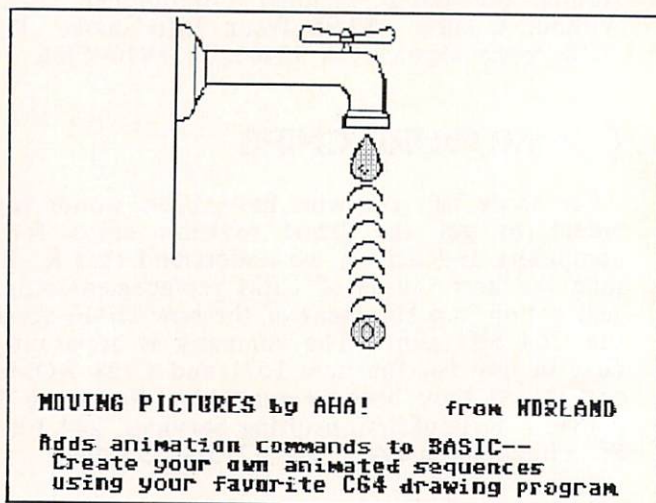
Acquisition database manager for the Amiga.

20MB HARD DISK FOR AMIGA

The latest 20 meg hard drive for the Amiga comes from Jefferson Enterprises (2043 W. Schell Dr, Phoenix, AZ 85023 602-993-4009). The \$895 unit interfaces via the parallel port and requires a special startup file.

MOVING PICTURES

Moving Pictures is an animation program for the C64 developed by our good friends Chris Zamara and Nick Sullivan at The Transactor. Moving Pictures is a script-oriented full-screen animation language which uses animation extensions to BASIC to achieve its goals. You produce the actual animation screens with your favorite C64 graphics package, like Doodle! or Flexidraw. The documentation is sparse, but the program includes on-line help. Moving Pictures is \$29.95 from: Norland, 251 Nipissing Rd. Unit 2, Milton ON Canada L9T 4Z5 416-876-1148.



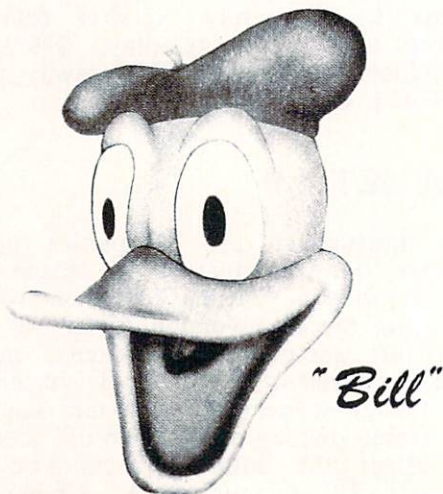
GRAPHICS TRANSFORMER

The Graphics Transformer for the C64 provides graphics file translation among 22 graphics programs.

It will also convert a paint file into a standalone displayable file, or break it into separate bitplane and color maps for use in your own software. It's \$34.95 from: CDA (a very strange group of guys), PO Box 1052, Yreka CA 96097, 916-842-3431.

DELTA MAN

If you enjoy nuclear devastation and blasting geeks, you'll love Delta Man. In this graphic action arcade game, you are a battle-suited survivor of the nuclear death of Chicago, fending off radiation-mutated humanoids as you search for supplies in the ruins. \$19.95 from: Cosmi, 415 N. Figueroa St., Wilmington CA 90744, 213-835-9687.



A duck, courtesy of Graphics Transformer.

MUSIC MOUSE

Music Mouse is a new Amiga music program by Laurie Spiegel. If her name is familiar, it is probably because she is a renowned electronic composer; one of her electronic compositions (pre-Amiga) was *Harmonia Mundi*, selected to be the first cut on the Voyager spacecraft videodisk. MM (which was originally a Macintosh program) is a difficult beast to identify, but it might be best described as "Instant Music for Professionals". MM gives you full control over the music that is played through your Amiga (or MIDI-connected electronic instrument) via mouse movement in both the X and Y directions in combination with control keys on the keyboard. The permutations range from strange and wonderful to downright obnoxious, dependent on your degree of skill with the program. Because there are so many options, playing with Music Mouse is like playing a new musical instrument, with much of the attendant need for practice and diligence. The results I have gotten so far just hint at what might be possible with the program, but I've managed a piece that sounded like rhythmic background music for an African documentary already. We'll be taking a closer look at Music Mouse in a future issue. In the meantime, it is still being beta tested, but you can learn more by contacting: Opcode Systems, 444 Ramona St., Palo Alto CA 94301, 415-321-8977.

THE BOSS

If you are interested in creating your own specialized telecommunications programs for the C64, you have run up against the problem of conveniently accessing modem functions from BASIC. The BOSS is a set of telecommunications-specific extensions to BASIC to perform such elementary modem functions as HANGUP, PICKUP, RING, etc. Also included is the Generic BBS System, a BBS you can customize to your own purposes. \$35 from: SoftTools, PO Box 1205, Montreal QB Canada H3X 3Y3, 514-739-3046.

THE RULER FOR C128 W/1750

The Ruler is a CAD/drawing program for the C128 that requires a 1750 RAM expander. You draw on a full-sheet-size virtual screen, and parts and components are kept in memory for CAD work. A library of parts is included. 1350/51 mouse is recommended. From: Bone Frontier, 8995 Grove St., Westminster CO 80030, (303)-427-8729

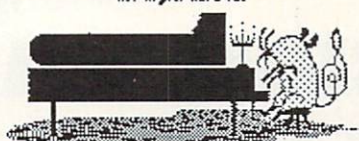
NEW, IMPROVED CONVERSATION

Gil Dodgen's excellent Amiga program *Conversation With A Computer* has been improved with the addition of a very competent Checkers program. Full source code and commentary on integrating Amiga BASIC with C code are included. Check it out. \$34.95 from Jenday Software, PO Box 4313, Garden Grove CA 92642, 714-636-3378.

Music Mouse™

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All Rights Reserved



REIGR version by David Silver & Laurie Spiegel

Copyright for music performed in REIGR version held by Laurie Spiegel. This software should contain the statement: "Music created using Music Mouse by Laurie Spiegel".
 Opcode Systems, 444 Ramona St., Palo Alto, CA 94301, 415-321-8977

ELECTRONIC MAIL

- 1 Check Mailbox
- 2 Send Mail
- 3 Users List
- 4 Validate users

Enter your selection: |

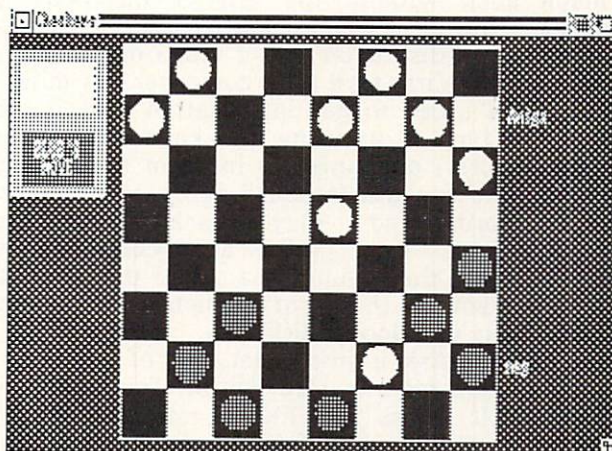
Here's what you entered so far:

USER NAME:
 REAL NAME:
 PHONE NUM:
 COMPANY/CITY:
 TERMINAL WIDTH:

Does everything look alright so far?

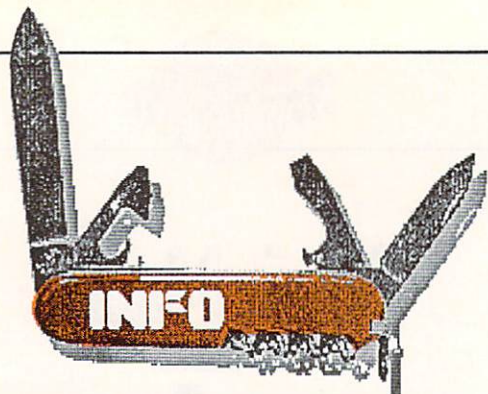


Generic BBS for the C64 from The BOSS disk.



Checkers from *Conversation With a Computer*.

...continued on page 66



SURVIVAL ★ GUIDE ★

If you already own and comprehend a computer system, then this article is not for you. But if you have been wondering how in the world anyone gets started in computing, read on. This is the article you've been waiting for!

If you've had to suffer through listening to an indoctrinated computer owner talk about his computer, you are probably as confused as you can be about personal computers. What do all those strange terms mean? Well, in this article we're going to try to get you through the basics of computing as painlessly as possible. We hope to show you that you don't need to join some secret society to get into computing. After all, none of us grew up with computers--we were all novices once. If you've been wanting to know about computers but didn't know who to ask, you've come to the right place!

What do I need to buy?

The computer itself is just the brain of a computer system, and like the brain it's not much good without the rest of the body. In order to do anything useful, a computer system also needs a disk drive and a video monitor.

When you first turn on a computer, its mind is blank. In order to get information into it, you have to type it in using the keyboard (a very slow process) or transfer it in from a recording. Computers can use standard audio cassette tapes to record and play back information (Commodore even sells a special cassette recorder for their computers called the **Datasette** that lets you do this), but a much more efficient medium is the floppy disk.

A floppy disk is just a flat disk of magnetized plastic that records information for permanent storage. It works just like a cassette tape, but it's faster and more efficient. In order to play back the information stored on a disk and load it into your computer, you need a disk drive. Without a disk drive, every time you turn off your computer it will forget all the information you've typed into it. With a disk drive, you can save that information on a floppy disk and load

it back into the computer the next time you 'power up'.

A video monitor displays the information your computer puts out. With some computers (like the Commodore 64) you can use a normal TV set for a display. But Commodore 128 and Amiga owners will need to buy a special video monitor for their computers. You can also add a video monitor to a Commodore 64 system for a much clearer and cleaner display.

If you want to print anything out on paper you will need a printer, too. You don't *have* to buy a printer for your system, but if you do you will be able to do much more with it, like printing out letters, making greeting cards, and printing financial and business reports.

That takes care of the important computer *hardware*, but what about *software*? Software programs are composed of instructions that tell the computer what to do. You usually buy software programs prerecorded on disks that you can load into your computer from the disk drive. A program can instruct the computer to play a game, help you file recipes, help you type and edit letters, or perform any of a multitude of other tasks. Whatever you want to make your computer do, you will have to first load in a software program to tell it how to do it.

Now let's take a closer look at each of these aspects of a computer system.

Which computer is best?

If you want a computer for home use, one that will play lots of games, figure your budget, and type personal letters, then by all means consider the **Commodore 64**. Nobody has ever made a better game machine, and it's perfectly capable of doing all those other things quite well. With a little perseverance, imagination, and ingenuity, the Commodore 64 is capable of some really incredible things. We put out the first six issues of **INFO** using only Commodore 64 systems. There are thousands of programs available for the Commodore 64, including hundreds of games. It's the least expensive personal computer in the universe, with lots of options and upgrades available. After all, six million Commodore 64 owners can't be wrong!

The Commodore 64 has been replaced by the new **Commodore 64C**, so you can get some great deals on closeout Commodore 64s now. The 64C runs and works exactly like the Commodore 64, but it has a new, white, high-tech look. The price is also higher, so we suggest you pick the 64C only if you like the looks and don't care about the \$40-\$60 price difference.

If doing serious work with your computer is extremely important to you, take a good look at the **Commodore 128**. The Commodore 128 is in many ways twice the computer the Commodore 64 is, with many features that make it a better choice if most of your computing time will be spent on 'serious' applications like

wordprocessing or finances. There are lots of good programs for this machine, and it also plays all the Commodore 64 games!

The **Commodore 128D** is a Commodore 128 in an attractive case with a built-in disk drive. It looks a lot like an IBM computer. It works exactly like the Commodore 128, so if you are considering a Commodore 128 you might want a C-128D instead just for its good looks.

The **Amiga 1000** is a great choice if you are into graphics, music, or video. It also has the capability to be a powerful business machine, though business software is just now beginning to become available in quantity for it. It's a fantastic game machine, too, with many games available now and more on the way. But at this point in time, you might want to consider buying one of the newer members of the Amiga family.

The **Amiga 500** has not come to market yet, but it's due out soon. It runs all Amiga 1000 software, but it's a newer, more compact and efficient design with some exciting new features at a reduced price. With a price of only \$600, we expect the Amiga 500 to be Commodore's new flagship machine; it will probably be the hottest selling personal computer for the next several years.

If you want to pull out all the stops, and cost is no object, then consider the **Amiga 2000**. At \$1795, it's not cheap, but it runs all A1000 software and can be expanded as far as your pocketbook allows. This is a very versatile computer, and you will need some expert help to make sure you purchase the right components and get it set up properly. But if you do buy an A2000, you won't have to worry about having to upgrade to another computer system for a long, long time.

What about other Commodores?

Commodore has made several other computers in the past. You can still find all of them used, and some are still available new at closeout prices. But unless you already know a lot about computers, or have a very dedicated friend to help you select, buy, setup, and operate a computer, you are best advised to stay away from the Commodore Plus/4, VIC-20 or any Commodore computer other than the Commodore 64, Commodore 128, and Amiga systems we've already mentioned.

Where should I buy my computer?

The answer to this question depends on what kind of support you need from your dealer. At a local computer store you can ask questions, try out software and hardware, and get advice on putting together an entire system. After you buy, you can go back and ask more questions. Of course, you generally pay a little extra for all that help, but it can be well worth the cost.

A mail order house will often give you the

best price, but you'll generally have to know what you want in advance. Make sure they have a return policy and fast, reliable service. Check out their reputation with others who have ordered from them if you can. Your local Commodore users group is a good place to ask around.

Chain stores usually offer good prices, and if you get a lemon you can generally trade in a bad computer for a good one on the spot. But only about one chain store in a hundred has anyone running the computer dept. who knows anything about computers, so take all advice with a block of salt. Again, you'll have to know what you want before you buy.

Refurbished units can be a great deal if the dealer you are buying from offers good support. A refurb unit usually comes with a warranty, and can often be even more reliable than a new unit, since it has been serviced and rebuilt.

Buying a used computer is more of a crap shoot. Sometimes you can get an almost new unit that's just fantastic. Sometimes you get a dead computer. In any case, make sure you're getting at least 40% off the discounted new price, and insist on trying out the whole system. We strongly suggest that you not buy used unless you know a lot about computers, or can enlist the aid of someone who does.

If you use the resources of your local dealer to help you decide what components and software to buy, then you owe it to your dealer and to yourself to buy your computer from him. Ask yourself this question: "Could I have done as well without him?" If the answer is "No", then ask yourself how he earns his living, and how long he'll be around if people use his store as a resource center to decide how to spend their money elsewhere.

What disk drive should I buy?

As we said earlier, every computer needs a disk drive. Without one, you can't load and run programs and you can't permanently store information.

Amiga buyers don't even have to ask what drive to buy--a disk drive is built into all models of the Amiga. The Commodore 128D also has a built-in disk drive. Everyone else will have to decide what to get.

The **1541** is the standard drive for the Commodore 64, and it also works with the Commodore 128. If you are planning on buying a Commodore 64, you are safest if you go ahead and buy a 1541 drive. If you can afford the extra money, the **1571** drive is the preferred drive for the Commodore 128. It will work with the Commodore 64, too, but it was really designed to give you many special features when used with the Commodore 128.

You can consider other disk drives for the Commodore 64 and Commodore 128, but most are of use only as a second disk drive. Among

Here are INFO's suggestions for putting together a starter system. There are many other products available in these categories. Check the INFO Product RoundUp issue #14 for descriptions and evaluations of over 2200 products for Commodore computers.

COMMODORE 64

SUGGESTED STARTER SYSTEMS:

Commodore 64 computer	\$150
or	
Commodore 64C computer	\$190
<hr/>	
1541 disk drive	\$190
or	
FSD-2 disk drive	\$160
<hr/>	
Fast Hack'Em copy software	\$30
or	
SuperKit copy software	\$30

ADDITIONAL HARDWARE

Commodore 1802 monitor	\$220
or	
Commodore 1702 monitor	\$180
<hr/>	
Commodore 1650 modem	\$90
or	
Commodore 1670 modem	\$200
<hr/>	
C.Itoh 8510S printer	\$800
or	
Okimate 20 color printer	\$265
<hr/>	
MW 350 printer interface	\$90
or	
Xetec Super Graphix interface	\$99

ADDITIONAL SOFTWARE

Paperclip wordprocessor	\$40
or	
Pocket Writer 2 wordprocessor	\$40
<hr/>	
Superbase database manager	\$99
or	
The Consultant database mgr.	\$60
<hr/>	
Calc Result spreadsheet	\$99
or	
Pocket Planner 2 spreadsheet	\$40
<hr/>	
BobsTerm Pro 64 terminal prg.	\$60
or	
Smart 64 Term +3 term. prg.	\$550
<hr/>	
Ultimate Wizard game	\$30
Pit Stop II game	\$40
Flight Simulator II	\$50
Elite game	\$35

COMMODORE 128

SUGGESTED STARTER SYSTEMS:

Commodore 128 computer	\$270
or	
Commodore 128D computer w/drive	\$700
<hr/>	
1541 disk drive	\$190
or	
1571 disk drive	\$250
<hr/>	
Commodore 1902 monitor	\$350
or	
Teknika MJ-22 monitor	\$250
<hr/>	
Fast Hack'Em copy software	\$30
or	
Copy II 128 copy software	\$40

ADDITIONAL HARDWARE

Commodore 1650 modem	\$90
or	
Commodore 1670 modem	\$200
<hr/>	
C.Itoh 8510S printer	\$800
or	
Star SG-10 printer	\$300
<hr/>	
MW 350 printer interface	\$90
or	
Xetec Super Graphix interface	\$99

ADDITIONAL SOFTWARE

Paperclip II wordprocessor	\$80
or	
Pocket Writer 128 wordprocessor	\$50
<hr/>	
Superbase 128 database manager	\$99
or	
Flexfile 128 database manager	\$50
<hr/>	
Multiplan C128 spreadsheet	\$45
or	
Vizastar 128 spreadsheet	\$90
<hr/>	
BobsTerm Pro 128 terminal prg.	\$80
or	
Sixth Sense 128 terminal prg.	\$50
<hr/>	
Bureaucracy text adventure	\$40
Trinity text adventure	\$40
Big Blue Reader CP/M utility	\$45
Partner 128 application	\$70

AMIGA

SUGGESTED STARTER SYSTEMS:

Amiga 500 computer	\$600
or	
Amiga 1000 computer	\$700
<hr/>	
Disk drive is included with computer but additional A1010 external drive	
	\$300
<hr/>	
Commodore A1080 monitor	\$400
or	
Sony KV-1311 monitor	\$500
<hr/>	
Marauder II copy software	\$40
or	
The Mirror copy software	\$50

ADDITIONAL HARDWARE

Amiga 1680 modem	\$300
or	
Avatex 1200 modem	\$150
<hr/>	
Epson FX-80 printer	\$600
or	
Okimate 20 color printere	\$265
<hr/>	
Printer cable	\$30

ADDITIONAL SOFTWARE

PageSetter desktop publishing	\$150
or	
Scribble wordprocessor	\$99
<hr/>	
Acquisition database manager	\$350
or	
InfoMinder database manager	\$90
<hr/>	
Logistix spreadsheet	\$250
or	
Maxiplan spreadsheet	\$150
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Commodore Amigaterm terminal prg.	\$50
or	
MacroModem terminal program	\$70
<hr/>	
Deluxe Paint II graphics prg.	\$130
Flight Simulator II	\$50
Faery Tale Adventure	\$50
Shanghai game	\$45

All prices are approximate. For availability, check your dealer or the INFO Product RoundUp, issue #14.

those available are the 1581 (which is Commodore's latest entry), older Commodore drives like the SFD-1001 and the 8250, drives from other companies like the FSD and MSD, and various hard disk drives.

A second disk drive is a great convenience, but it's not a necessity. You may want to wait until you've had more experience with your computer before you invest in a second drive. If you do decide you want one, you can buy a second drive identical to your first or try one of the other possibilities we've mentioned. If you are considering a hard drive, you may want to ask the advice of an expert. For the Amiga, you'll want the 1010 disk drive, which is just like the one built into the Amiga but comes in its own case. The larger 1020 Amiga drive is much different, and is intended for the specialized application of letting you run IBM/PC programs on your Amiga.

Which monitor should I get?

There are two types of video monitors, color and *monochrome* (literally: *single color*). You can use a monochrome monitor with any Commodore computer, but they all produce such incredible color graphics that it's a shame to use anything but a color monitor with them. If you decide to buy a less expensive monochrome monitor, you have your choice of black and white, amber, or green displays. Which you get is just a matter of preference.

The Commodore 64 can use a TV for its display. But for a less fuzzy display, use a *composite video monitor*. Commodore's 1802 is a good choice, as are many others from other companies. For even better output, buy a monitor with separated *chroma* and *luma* inputs.

The Commodore 128 puts out two different kinds of video display, and you'll need to find a monitor that will handle them both. Look for a monitor that will accept both *composite* and *digital RGB* (or *RGBI*) inputs. Commodore's 1902 is fine. Once again, look for separated composite video inputs.

The Amiga uses an *analog RGB* (or *RGBA*) monitor. The Commodore A1080 monitor does fine, and though we like the Sony KV-1311 better, it costs much more.

If you are planning on buying a monitor for a Commodore 64 or Commodore 128 now, but you're thinking about upgrading to an Amiga system later, buy a monitor that has composite, RGBI, and RGBA inputs; then you won't have to buy a new monitor when you upgrade. Commodore's A1080 Amiga monitor and the KV-

1311 both have all three inputs, as do many others. With such a monitor, you can even hook up both a C64 and an Amiga to the same monitor and switch back and forth from one computer display to the other.

If you buy a Commodore monitor, you will get the proper hookup cable in the box with the monitor. If you buy a monitor from another company, you will need to order a special cable from your dealer or from a mail-order company that specializes in cables.

What about a printer?

There are three types of computer printer: *dot matrix*, *daisywheel*, and *laser*.

Laser printers are for professional use and cost \$2000 or more. We use a Hewlett-Packard LaserJet Plus to typeset INFO.

Daisywheel printers used to be the only truly high-quality printers. But improvements in the quality of dot-matrix printers in the last few years have all but made daisywheel printers obsolete.

A dot-matrix printer produces print on paper by printing lots of tiny dots very close together. Many dot matrix printers today are capable of producing nice, clean, letter-quality output. A dot-matrix printer is the printer of choice for most Commodore computer systems.

Commodore makes a couple of dot-matrix printers, but they are not the best printers on the market. Their one advantage is that they plug right into a Commodore 64 or 128 without any surprises. But you will get much better performance if you buy a printer from another company.

There are several important qualities to look for in a dot-matrix printer. More *pins* means better print quality. Ask about the type of paper feed the printer uses. If it's *friction feed* only it can't use inexpensive computer printer paper. If it has a *tractor feed* you will be able to use computer paper, but a *pull tractor* is more useful than a *push tractor* because it pulls the paper through the printer making it less likely to jam. And make sure it uses a widely-available inexpensive ribbon. Some use a hard-to-find special cartridge that can cost \$10-\$20 each!

Some printers made by other companies plug directly into the Commodore 64 and Commodore 128, but 'generic' printers are often better. If you buy one you will have to hook them up using a special *printer interface* or a direct parallel cable. If you want to use a 'generic' printer, ask for help on printer interfacing from someone who has faced the problem before.

Some good printers to try with a Commodore 64 or 128 system are the Star SG-10, the C. Itoh 8510, or the Okimate 20, which prints in color.

When you buy your printer, also get a good supply of computer paper and a spare ribbon.

SURVIVAL ★ GUIDE ★

CONTINUED

It'll save you lots of anxiety in the middle of the night later.

If you buy a printer that needs a special interface, INFO rates the MW-350 from Micro R&D and the Xetec Super Graphix as the top of the line.

The Amiga will work well with a many printers, but you need to pick one that is specifically supported by the Amiga. This includes most popular printers, but you should check with your dealer before you buy, just to make sure what you get is compatible with your Amiga. You'll need a special cable to attach a printer to an Amiga 1000, but you can use a standard IBM cable with the A500 or A2000.

What is telecommunications?

It's communicating with other computers over the phone lines. To do it, you need a *modem* and a telecommunications program. A modem is a hardware device that plugs into the computer and the phone line and forms the electronic link between the two. The telecommunications software (often called a *terminal program*) lets you and your computer talk to other computers.

If you want a good basic modem for the Commodore 64 or 128, check out Commodore's 1650. If you can afford it, the 1670 runs four times as fast. For the Amiga, Commodore's 1680 is great. You can get other modems for each machine, but you'll need to carefully check out compatibility.

Telecommunications software depends somewhat on what you want to do, but for most applications **BobsTerm Pro** or **Sixth Sense** are fine for the Commodore 64 or 128, and Commodore's **AmigaTerm** works well for the Amiga.

Don't I need some extras?

You'll probably want to buy at least one joystick for your computer. Any standard joystick will work on all Commodore computers.

The only software you really need is a good disk backup program. We'd suggest **Prism's SuperKit** or **Fast Hack'Em** from Basement Boys for the Commodore 64 or 128, and **Marauder II** for the Amiga. With these programs, you'll be able to copy your software disks so you'll have a spare copy if a coffee spill destroys your original disk. [Note: With these programs it is also possible to copy software you have purchased and give copies to friends. Please don't. It's *Software Piracy* to do so, which is a violation of federal copyright law. You can make all the copies you want for personal use, but when you sell or give away copies to others

you are depriving the programmer who created the software of his means of making a living. It's a new moral question you'll have to wrestle.]

You'll also need some blank disks. Get a good medium-priced brand of *double-sided, double-density* 5.25" disks for the Commodore 64 or 128, and 3.5" disks with the same specifications for the Amiga. You can buy *single-sided, double-density* disks and not usually run into any problems, too. Start with a box of 10. Remember not to touch the actual disk surface through the little window on the disk, or you may make the disk unusable. Don't worry about buying any disk-cleaning products for at least the first year.

You will most certainly want to buy some software for your new computer. Test drive it at your local dealer first, if possible. If not, read the magazine reviews, keeping in mind that most magazines are somewhat biased when they review an advertiser's product. [In all modesty, the best all-around source for reliable information on both software and hardware is INFO's periodic Product RoundUp guide. The last one (#14) was 160 pages thick and listed over 2200 products for the Commodore 64, Commodore 128, and Amiga. Look for the RoundUp ad in this issue for information on how to order one...end of commercial. -Ed.] We'd suggest you take at least one great game home with your computer. If nothing else, you need some software with which to test your new computer (more on this later).

One other item you might want to get if you're buying a Commodore 64 with a 1541 disk drive is a speed-load cartridge. The 1541 drive is reliable but slow. A speed-load cartridge can really speed up your disk load and save times. We've had good success with **Fast Load** from Epyx and **Mach 5** from Access.

How the heck do I hook it all up?

Don't panic. First of all, we recommend that you get a power outlet strip with a built-in power switch, circuit breaker, and surge protector if possible. This will not only simplify the process of hooking everything up, but it will make your entire computer setup safer and more secure.

If you can, dedicate a desk to your computer. Your system will love you for not crowding it. A computer needs good air circulation and few chances for foreign matter to get into it for it to stand a good chance of survival. Make sure the computer area is relatively clean, and neither too humid or too dry. Static electricity and humidity are both enemies of computers.

If you don't have a desk, you can make a nice one by placing an inexpensive hollow core door across two sawhorses, inverted cardboard barrels, or two-drawer filing cabinets. If you are hooking up a Commodore 64 or 128 you will also need a monitor stand. You can buy one or

...continued on page 72

ANNE WESTFALL

Interview by Mindy Skelton

Anne Westfall is a member of a rare species; the native Californian, born and raised in the golden state. Westfall is rare in another sense. She is one of the few women actively and visibly involved in the field of computer programming. In case her name is not familiar to you from the early Electronic Arts ads, she was the programmer who gave us both Archon and Archon II, Adept.

Westfall gave up ranching and grape growing to begin her involvement with computers in the 70s just as home computers were making their first appearance. Today she continues to be involved in new and ever expanding computer projects. In the (small) amount of time not allocated to programming Westfall enjoys racket ball, hiking, white water rafting, birdwatching, reading fantasy, science fiction and mysteries and listening to 'new age' music.

Although she does not do her programming or development on one of Commodore's computers, Westfall thinks the Commodore 64 did great things for the home computer by introducing affordable computers and getting computers into more homes. Thanks to her talents, many computing enthusiasts have one more reason to be glad they bought one of these computers.

INFO: *Could you tell us, Ms. Westfall, how you got into computing?*

Westfall: In the late 70s my children were old enough to take care of themselves so I went back to school at Santa Rosa Jr. College. I really had nothing special in mind, but I was 'sampling' a little of everything; math courses, science courses, whatever seemed interesting. During this time I met a programmer and decided to take a course in programming. I took a course in BASIC and found that it was fun, so over the next couple of semesters I took more courses. The mathematics department eventually recommended me for a job with an engineering firm writing Civil Engineering programs. One of the main reasons I took this job was the chance to get actual experience. I think one of the hardest things in becoming a programmer is getting initial experience. Everyone wants experienced programmers but no one tells you how to get experience. While I was working for the engineering firm I met Jon Freeman, one of the founders of Automated Simulations Incorporated (later to become EPYX), who convinced me I ought to go work for ASI. After about a year there, Jon and I felt we weren't getting to do enough game design, which was what we really wanted to do, and I was frustrated at working in BASIC, which was a requirement at ASI, so we left and formed Freefall Associates.

INFO: *Not too long after the founding of Freefall we started to see you and Mr. Freeman in the early ads for Electronic Arts (the We see farther promotion). You were prominently featured as one of their new breed of programmers, and it was intimated that you*



ANNE WESTFALL

instrumental in founding the company. What, in fact, was your involvement in the birth of Electronic Arts?

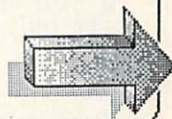
Westfall: I wasn't a 'founder', but I was there right from the beginning. Something I don't think was clear from those early ads was that none of the people pictured were employees of Electronic Arts. We were all independent authors who contracted with EA to produce games. EA likened themselves to a music production company with EA as the producers and us as the rock stars. Freefall, however, began talking with Trip Hawkins before there was an Electronic Arts; when all he had was the idea of starting a company to market and produce computer games. He liked our work and we liked his ideas so Freefall Associates signed one of the first contracts with him. We were to produce two products. The results were Archon and Murder on the Zinderneuf.

INFO: *People associate your name with Archon. Was Archon a solo product or were you part of a development team?*

Westfall: Archon was really the result of a trio of workers. Aside from me there was Jon Freeman and Paul Reiche.

INFO: *What part did you play on that team? Graphics? Programming? A combination?*

Westfall: I was responsible for the programming on the project. That is, I designed the user interface, the transitions, the tactical strategy of how the pieces fought, and the algorithms for the



Anne Westfallcontinued

game. Jon and Paul did the game design and the animation images. They would tell me how they wanted the game to look and behave - on a board, with pieces which could be picked up and placed on the board, a switch to a new screen for battles, etc., and I would produce the code.

INFO: *Are you at liberty to discuss any new projects you are involved in now?*

Westfall: Not really, but I can say that we are currently at work on something brand new. It won't be an Archon III. It's going to be a fantasy role playing adventure which I can say is going to be rather large. It's not due out until spring or summer of '88. There is really so much yet to do. If it were closer to being done, I could talk about it more. I think I can say it won't be like any of the games currently on the market. We've taken an entirely new approach to fantasy role playing.

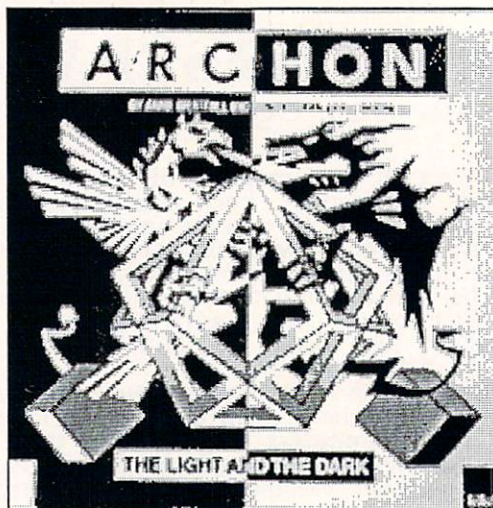
INFO: *OK. We won't press you on your new project. Let's go to a different subject. Computer programming is a preponderantly male field. What is it like for you to be working in this field? Does it, in fact, make a difference to be female in this line of work?*

Westfall: In the field of computing I am in (game software), I don't really think being female makes a difference. I may get a little more attention. I am part of a noticeable minority which in some ways may work to my advantage. The other programmers seem happy that I am there and, I think, would welcome more women. My suggestions are always taken seriously and I feel on an equal footing with the other programmers. Programming is a new enough field that there are no 'traditional' male or female roles. No one can say, 'The firm has done it this way for 150 years,' because the firm has only been around a few years or, in some cases, months.

INFO: *Have you been treated any differently because you are a woman?*

Westfall: I think not, although I would say that earlier in my career I was greeted with more scepticism whereas now I am greeted with enthusiasm. It's hard to generalize about female programmers from my specific situation. That is, it's hard to separate my treatment as a female programmer from the fact that I'm self employed, working on microcomputers and specializing in game software. I think this is the best possible situation, but it's an extreme case. A female programmer employed by a large old fashioned bureaucracy would be more likely to run into cases of male chauvinism (or for that matter unreasonable and thoughtless bosses).

One of the nice things about the business of microcomputer software, especially games, is that the people and companies in it are, almost by definition, fairly young independent and open to new ideas. Prejudice is not so much non-existent as irrelevant. Results - good games - are far more important than office politics or prejudice. Neither publishers nor consumers care if you are male, female, black, white, or green. The only thing that matters is the end product.



INFO: *Why do you think there are so few women involved in computing? What do you think we can do to change this lack of involvement?*

Westfall: I think part of the problem is that women see computers as 'electronic gizmos'. They see computing as 'technical' and think they are going to have to be in there with solder guns tearing the machines apart. Women need to think of programming as writing and remember they don't have to solder to program. When I started, I knew nothing about computers. I looked at programming as simply writing in another language -- solving puzzles, doodling with words which caused something to happen.

I think we need to get girls involved with computers at a younger age. I don't think girls are any less interested in computers, they are just different from boys. Less competitive and aggressive. Maybe that means they get less time on the computers at school, or that they find some of the games less interesting. I'm sure if girls had more interaction with computers, there would be more women programmers.

INFO: *Would you recommend other women take up your line of work, and if yes, how can they best prepare themselves?*

Westfall: I think this is a terrific field for women; you can set your own hours, you can work at home, you are the master (or mistress) of your own destiny. Programming requires (and rewards) the kind of patience and attention to detail that many women possess, far more than it rewards a 'masculine' aptitude for electronics. And besides, programming is fun.

I don't know the best way to get into this field. The obvious answer might be to say 'go to college and major in computer science' but a comparably good answer might be 'Buy a computer, some software, and some books on programming'. A woman (or man) can also get into the computer game business without being a programmer via art and graphics, music and sound effects, game design, or manual and ad copy writing. If one of these suits your interest try to get your hands on a suitable computer (an Amiga of course is suitable for most of these), some art and music software and start dabbling.

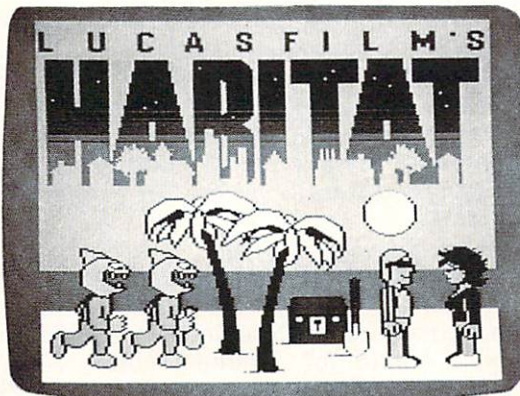


BEHIND THE LINES

Be sure to thank the Federal Communications Commission the next time you call a commercial network or a BBS outside your local calling area. Our government may not be perfect, but it's because of some far-thinking FCC members that telecommuters aren't back in the Dark Ages.

Data communications systems are FCC-regulated just like telephone companies and broadcast stations. And, although the high-pitched sounds produced by modems are handled differently, they are transmitted over the same long distance telephone lines and bounced between the same satellites that carry voice conversations. Modem beeps are stored in packets that are saved up and sent in carefully orchestrated bursts, and providers of the dedicated data lines that do this have their own fee schedules and have not traditionally been subjected to long distance tariffs.

This arrangement almost came to a screeching halt in March when the FCC was prodded by AT&T and sister companies to re-regulate packet-switched carrier services. Best known of these services are Telenet (along with its PC Pursuit service) and TYMNET, but CompuServe Information Services (CIS) and GENie have dedicated data lines which would have been affected, too. Had the Commission implemented one of the proposals they considered, telecommunications surcharges on the order of \$8 to \$10 an hour would have been passed along to the end-user...or at least to whoever was left online. But that particular proposal was rejected (thank goodness) and the telcom industry heaved a collective sigh of relief when the FCC made few changes to the system as it now stands.

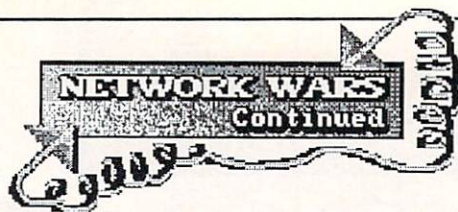


MARKETING QUANTUMLINK

When Commodore switched to QuantumLink and C64-specific system software, many industry experts predicted the worst. They'd forgotten how confusing computers are in general, and the mysteries and miseries of getting used to ASCII-based networks. Some even claimed that Commodore would live to regret giving up their popular SIG on CompuServe, but probably not for long (implying that they wouldn't be around to regret it). CompuServe itself wasn't any too happy about the change either, but that was largely because Commodore would no longer include introductory free time on CIS with every computer, modem and communications package they sold.

Marketing. A friend of mine defines it as the art of creating a need, and I only wish Commodore could market the Amiga as well as they have QuantumLink. That place is jumping! Upwards of a thousand members sign-on some evenings to play interactive games, cards and trivia, leave messages, download the latest public domain programs and demos of commercial software, talk with close friends they'll probably never lay eyes on and attend organized conferences, among other things. Although Commodore advertises QLink through normal channels, the trick to getting this many people online can be traced directly back to the information and software provided free with their hardware. That gets new users online, and the humanness and diversity of things to do hooks them. I'm willing to venture that if it can be done online, you can probably do it on QLink.

The only thing you can't do is sign-on with a computer other than the C64 or C128, or use any telecommunications software besides Qlink's easy-to-use, brightly colored 40-column display software. Almost anything worth doing on QLink costs \$3.60/hr. anymore, though you do get basic access and one free hour of "plus time" for your \$9.95/month membership fee, which you pay whether you use QLink or not. They have a new Casino games disk but at press time, they *still* weren't talking about availability of The Habitat, software that's supposed to let you create and use animated characters online. That's being programmed by Lucas Films and



will be available as soon as it's ready. One inside source hinted, too, that software for allowing Amiga access is in the works.

ANOTHER FATALITY

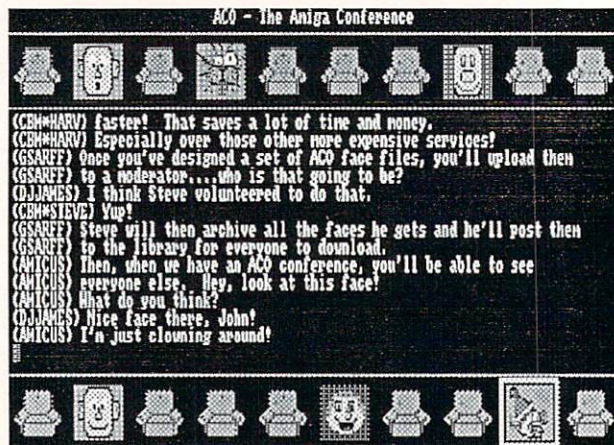
After precisely two years of operation, the *FlagShip* Commodore was officially retired from Delphi in mid-April. Differing philosophies between Delphi management and Deb Christiansen, *FlagShip* manager, had as much to do with it as anything, although the *FlagShip* had never knocked 'em dead despite good public domain libraries. John Gibney of Delphi promises continuing support of Commodore users as soon as they can organize new SIG management, but details weren't available at press time.

Interestingly enough, the *StarShip* Amiga is steaming ahead on the same system with (surprise!) Deb Christiansen still at the helm. She and her crew also operate the successful Commodore and Amiga RoundTables on GENie, which likely influenced the demise of the *FlagShip*.

FUN VISUAL CONFERENCES

Speaking of activities pertaining to the Amiga, take a good look at ACO, terminal emulation software by American PeopleLink's (Plink) AmigaZone SYSOPs. It has a color-graphics conference mode that is eye-catching, to say the least. ACO's inner workings have for some time been in the public domain as the respected COMM program, and Amiga Plinkers are looking forward to designing faces with ACO's graphics editor for the new ACO application. Each user can have up to five different faces or graphics blocks that appear one at a time at the top and bottom of every ACO user's screen. These faces can be swapped via pulldown menus as Plinkers participate in online conferences -- which they do quite a lot. ACO also has a split screen for typing lines before sending them, as well as little red-and-white balls you can bounce around other people's screens -- it's incredibly fun!

The only problem I can foresee with ACO involve the crowds on AmigaZone conferences. (Other networks would love to have this particular problem, believe me). Only faces for the last 20 people who typed something can be shown in ACO at once, and attendance in the Zone's Sunday night live conferences (9PM Central time) regularly surpass that. It hasn't topped a hundred when I've been there but 60



ACO demo terminal program from PeopleLink.

to 80 people are commonplace. (How many times have you seen -- much less been able to communicate with -- that many Amiga owners in one place?) I'm wondering what happens if more than 20 of them are using ACO.

The AmigaForum on CompuServe plans to debut their Amiga graphics-and-sound terminal program in early June. Called ICONtact (which could change), it features a movable and resizable graphics/text window for each conference participant, with your text input window at the bottom of the screen. For more informal conferences, six of these windows fill the screen while others pop-up as people type in pre-placed spots; you can use the mouse to put more important windows where you won't miss them, or scroll back a line or two in each if you do. Along with 10 colorful faces (in Deluxe Paint brush format, like ACO), each person can design three sets of arms, too, and through limited animation do things like wave goodbye. If you think THAT sounds like fun, there are also the digitized sound effects like applause and laughter. ICONtact also has a separate screen with six fixed windows for larger, formal conferences and a regular ASCII-based screen on a background screen.

Most terminal programs are blah and, while they may be functional, too practical to be any fun. ICONtact and ACO are finally using Intuition and tapping into the graphics and sound capabilities of the Amiga for online activities. I congratulate these creative programmers and hope they are the trail-blazers for will turn out to be a trend.

BATTLE FORMATIONS

Another network with mucho Amiga activity is GENie's *StarShip* Round Table. While it doesn't have as much live interaction as Plink

(or QuantumLink, for that matter), my unscientific comparison of their program libraries leads me to believe that they are reasonably comparable. Both are packed with fabulous public domain and shareware programs which is one of the Amiga's greatest strengths, and if you aren't tapping into this resource somewhere you're really missing the boat. (Get it? Boat... StarShip?) GENie's message bases are structured quite differently from the other network's and I think they're easier to navigate once you learn the ropes. Don't miss Excalibur - it's a build-your-own Amiga hard disk drive project.

Like their libraries, connect fees for GENie and Plink are comparable, too, with 1200 Baud access at roughly \$5 an hour. Now that Plink has WXmodem protocol (available in COMM and ACO), I don't think GENie's slick dedicated data line file transfers are the fastest in the industry anymore, but this is another observation I can't demonstrate statistically. The C64/128 areas on these two networks are very active and all things considered, it looks like Plink and GENie may be squaring off for a head-to-head battle over your Commodore online dollars. Speaking of which...

SPORTSFANS VS. BUSINESS

Back in 1982 when I joined CompuServe, hobby and personal computing forums were just start-ups on what was almost exclusively a weekday business system. *The Online Gospel According to CompuServe* at that point was that connect fees, which were \$4 an hour on evenings and weekends at 300 Baud (which was all my \$79 VIC modem would do), would naturally be reduced as PC sportsfans discovered and began using the system in greater number. Those of us online then congratulated each other on being pioneers, despite the expense. Which just shows how naive we were, because although hobby services have expanded rapidly since then, the economy of scale we were promised hasn't come about. CompuServe's subscriber base has almost doubled to its present 350,000 ID's, but instead of going down, connect fees have gone UP by 50%, from \$4 to \$6 an hour for 300 Baud (plus \$.25 or \$2 an hour for communication surcharges depending on whether you call on a direct CIS line or use a carrier service). I don't remember how much 1200 Baud was then because I didn't use it, but it's up to \$12.50 an hour (plus surcharges) now on evenings and weekends.

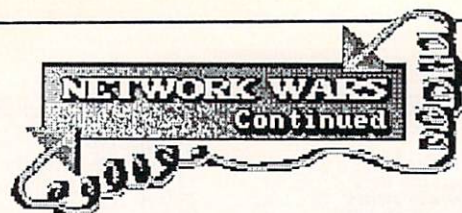
Widespread popularity of the personal computer was good for a lot of people. It spawned several new communications services, most of which, either in content or price, are less business-oriented than CompuServe. And while it is still the most extensive and has lots more subscribers than do the newer networks, I

AmigaDOS				
Category 12 Project Excalibur: Our Do-It-Ourself Hard Drive!				
No.	Subject	Msgs	Status	Author
1	Introducing Excalibur!	2	Open	DEB (*Sysop*)
2	Name the project topic	2	Open	JST (Scotty)
3	Tuning the warp engines	79	Open	JST (Scotty)
4	Your GENie pals need YOU!	48	Open	JST (Scotty)
5	Excalibur's Sheath	23	Open	D.W.B.
6	Questions, Questions, Questions...!	53	Open	DEB (*Sysop*)
7	Logo	22	Open	CCH (Fairhead)
8	Prices for equipment for the project!	64	Open	JIMMYB
9	SIGN UP LIST	188	Open	RCHRISTENSEN
10	Drive specs and such.	12	Open	JIMMYB
11	What Am I going to have to DO?!	5	Open	DEB (*Sysop*)
12	Kits	2	Closed	CCH (Fairhead/Sysop)
13	Arthur device	4	Open	M.MCKEE (AWaniac)
14	Trouble in paradise!	21	Open	JIMMYB
15	Excalibur Progress Report	4	Open	DEB (*Sysop*)
Category 13 Musicians' Corner				
No.	Subject	Msgs	Status	Author
1	Amiga Musicians' Guild	1	Open	DEB (*Sysop*)
2	Music Studio (ActiVision)	12	Open	DEB (*Sysop*)

GENie menu screen.

see indications that the ratio of business to hobby users on CompuServe is flip-flopping. Press access, for instance, used to be available seven days a week. When I would ask, "Weekend?" back then, they'd say, "Great!" But not anymore. Last year CIS began limiting weekend press access to special circumstances. That tells me that evening and weekends are as busy (maybe even busier) than weekdays. And without actually saying so, CompuServe made a statement by reducing weekday connect fees for April and May to evening rates. Clearly that's an invitation for the evening hobby crowd to sign on during the work day.

Another indication of the relative importance of hobby telecommuting was when GENie implemented free connect-time for uploads and PeopleLink followed suit. Besides goodwill, there's some status involved in uploading a hot file for the benefit of others (which is also a benefit for the network, of course) but the status doesn't offset the cost of uploading for the vast majority of people. There's more to a good computer forum (or SIG, Club or RoundTable) than program libraries, of course. Going online can be a lonely experience, and the live, interactive environments encouraged by Quantum and PeopleLink may very well be responsible for their recent successes. The overall tone is established by the people who work there and their attitudes and interests determine to a great extent both WHO and WHAT goes on. But in the final analysis, everything filters down to the membership -- the paying customers -- and THEY (read YOU) are ultimately what makes or breaks a system. More to the point of this little essay is the fact that good data libraries are big drawing cards for computer forums and since CompuServe was already charging more than twice as much as GENie or PeopleLink for 1200 Baud access



(which is four times more efficient than 300 Baud for file transfers), they were pretty much FORCED to offer free uploads just to stay in the game. That must have been particularly rankling for CompuServe because they're accustomed to being the trend-setter.

Now CompuServe has cooked up a way to theoretically reduce online costs for forum members through a series of paper-bound books describing the public domain files in their data libraries. Called THE BEST OF AMIGA, BEST OF COMMODORE, BEST OF MAC, etc., you're supposed to use the book for your computer to figure out downloads before you sign-on and start paying. While this is a step in the right direction, these books (which retail for \$9.95 each and can be ordered online) obviously don't include files uploaded since they were published, and in this fast-paced industry that can be a serious problem. (The Amiga version, February 1987, contains descriptions of 362 files and programs. It may not be a fair comparison because these BEST listings are selective, but in April, Plink claimed to have over 1500 Amiga files online and GENie something like 1800, and I can attest to the fact that they've had lots more files all along than CIS.) But the very existence of books describing public domain and shareware files lends credibility to my conclusions about the number of hobby-oriented subscribers online these days. CompuServe's real problem is that their connect fees are still geared for business users who incur them as tax-deductible expenses or pass them along to others, and hobby users can't do that. It costs a bundle to advertise as extensively as CompuServe does and support the variety of services they offer but I think they'd be better off redirecting some of that capital into a more competitive rate structure for us hobby folks now that the balance of power appears to be shifting. After all, they aren't commonly referred to online as CIS for nothing.

WOUNDED IN ACTION

While the Mac and IBM SIGs are doing nicely, The Source's Amiga and C64/128 SIGs are relatively empty and are not pulling together as well as they'd hoped. The Source's new multi-user CHAT system is available. It sports lots of fancy features and like all things new and unfamiliar (especially on a text-based network) can be tricky to use. If you need help with it try the Newcomers Chat Workshops on Saturday nights from 9 to 11PM EDT. Get there by entering CHAT at the system's -> prompt and typing -J 3 after the list of open chats.

Response time on The Source is slow by comparison and some of the commands are downright arcane, but the system itself has much to offer the more serious telecommuter, and their operating manual and monthly newsletters are first-class.

Isn't it ironic that of all these networks, only ProtoCall doesn't have error checking protocol -- its namesake -- for program transfers? I suspect that's why it hasn't done as well as parent company (Interplay of Washington, D.C.) had projected. ProtoCall is cleverly arranged as a real city, designed for live conversation and role-playing games, and while access is occasionally as low as 10 cents an hour (and that's no misprint), there's not enough meat online to get people there to tell them about those bargains. ProtoCall's 2000-character limit on ASCII files frustrates computer hobby users because text-based BASIC and C program listings (or articles, for that matter) must be pasted together somehow after transfer to reconstruct the original file. That's assuming that someone split them up and put them there in the first place, which doesn't happen often. Although a number of interesting people and activities are available, those two problems -- 2K file limits and no protocol -- render ProtoCall's computer SIGs practically worthless. Although I enjoy CB-type chatting there myself, it's beginning to look like a strictly talk-oriented network isn't strong enough to exist on its own and could be an idea before its time.

DOWN WITH PIRATES!

Along with six or eight others, I was selected to beta test Aegis Development's terminal software Diga! (rhymes with Amiga). Since beta software is in a prerelease state, it's never copy-protected. But while Diga! was copyable, each beta disk had a unique serial number embedded in the program code, and that's how Aegis was able to backtrack to the beta-tester ultimately responsible when it turned up on a public bulletin board system. I understand there were extenuating circumstances so I'm not going to further embarrass the person who lost his/her job over that situation but let it be a lesson to all of us: Software piracy is a crime. Don't do it!

The Software Publishers Association is offering a \$100 reward for your help in exposing electronic bulletin boards that illegally share commercial programs. If you know of any such board, INFO urges you to contact the SPA at 1111 19th Street N.W., Washington, D.C. 20036.

See you online!

-Peg



1764 RAM Expander

by Mark R. Brown, Tech Editor



1764 RAM EXPANDER

Commodore has started shipping its 1764 RAM expansion module for the C64 and C64C. It adds some interesting capabilities to the 64, though not everyone will have a use for it. For \$139, the 1764 carton contains the 256K RAM expansion module, a diskette full of support programs, and a larger, beefier power supply for your C64.

YOU HAVE THE POWER

The power supply is the same size as the hefty C128 power supply. It's necessary because the 1764 draws too much power for the normal 64 power supply (which is notoriously underpowered, anyway) to handle. Once you plug it in, you will probably never again have any power supply related problems with your C64, which in itself is worth \$40-\$60 worth of the unit's asking price.

THE MODULE

The RAM unit contains 256K of expansion RAM, less than the originally announced 512K, but more than the rumored 128K. This increases total C64 system RAM capacity to 320K.

Physically, the 1764 is big but not unwieldy. It lays out flat and extends to the right and behind the 64, so you may have to do a little rearranging to get it to fit on your desk. It doesn't provide a pass-thru for cartridges, so you might want to get an expansion chassis if you use many cartridges. We'd suggest an L'bow or other expander that will let you lay the 1764 flat and stand other carts up vertically. (A 1764 standing upright looks not unlike a drive-in movie screen, and we imagine it would have about the same wind-load stress problems.) Make sure you get a switched unit for maximum compatibility.

If you are planning on buying a C128

eventually, you may be upset to discover that the 1764 will not work with the C128 at all, just as the 1700 and 1750 RAM expanders for the C128 will not work with the C64. Since it's not too hard to modify a 1750 to work with the C64, we imagine the 1764 could probably be modified to work with the C128, too. Line up your friendly local hardware guru to help you figure it out.

THE SOFTWARE

Without the proper disk-loaded software, the 1764 makes a good carving board. The RAM in the 1764 is not directly accessible to the C64 for programs or data storage--you have to do it under program control. You can write your own programs to access the RAM via DMA (Direct Memory Access), or you can use the RAMDOS program, which makes the 1764 emulate a Commodore disk drive.

A RAMdisk gives you most of the advantages of owning two drives, plus absolutely incredible speed, but you have to first transfer files into RAMdisk from floppy (that takes time), and you've got to save anything permanent to disk before you power down. But in between those two operations, you will have some *fast* file access! RAMDOS isn't 100% compatible with commercial software. If you want to use it with a specific application, be sure to check out compatibility before you buy.

GEOS

One commercial program the 1764 works *very* well with is GEOS. The disk contains the GEOS desktop 1.3 upgrade, which fully supports the 1764. The advantages the 1764 gives you with GEOS important enough that we'll be having Don Romero take a long look at this application in a future issue of INFO.

CONCLUSIONS

I like the 1764. It's a fun toy, it seems useful (especially with GEOS), and you even get a better power supply for your 64. Whether or not it's worth \$139 is up to you. If you've been thinking about adding a second disk drive or a beefier power supply anyway, it might be worth looking into. Just make sure the 1764 is compatible with the software you want it to work with, because it definitely *won't* work with everything. And if you ever plan on upgrading to a C128, you will want to consider the fact that you won't be able to take the 1764 with you, at least not without some hardware modification.

The L'bow 2-slot compact expansion chassis with reset switch is \$29.98 from: T.I.E. Ltd., 2061 West Mill Rd., Milwaukee WI 53209, 414-352-4000.



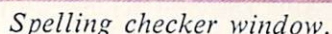
INTEGRATED THESAURUS

FLEET FILER DATABASE

Although Fleet Filer saves its data as sequential files, generally considered less desirable than faster acting random or relative files, the program nevertheless has fast record-scanning capabilities. You may easily exchange files with Fleet System 4's wordprocessor.

THE POSITIVES...

Earlier Fleet Systems products supported dual drives (a holdover from the PET era), but not



Except for the lack of presentation of alternative word choices, the spelling checker is truly first class, the star of the package; there's no hype in Professional's claims for it. The thesaurus is a snap to use, though I could not determine exactly how many synonyms and antonyms it contained, and the manual didn't say. Too, the thesaurus contains antonyms as well as synonyms, unlike many online thesauri, which contain only synonyms.

...AND THE NEGATIVES

Though adequate for most professional and office work, Fleet System will not adequately handle some chores. It won't conveniently

Fleet System 4continued

handle true, bottom-of-the page footnotes, nor is it designed to mix graphics with text. Also, it won't tackle multiple, newspaper-style columns, and it has no provisions for outlining or indexing your documents. Very few Commodore based wordprocessors handle tasks like these, however.

Although the Fleet Filer is surprisingly fast-acting, especially for one which uses sequential files, it is not as fully developed or comprehensive a product as the companion wordprocessor. The filer (I wouldn't call it a full-fledged database) can handle most home and small office filing chores, though it is definitely not in the class of such sophisticated powerhouses as SuperBase or the dBase family. The filer has no command or query language, generally the hallmark of top-of-the-line packages, nor are there any printer or screen default option or customization features. It's strictly 'plain vanilla.'

THE BOTTOM LINE

The many sophisticated features of Fleet System 4 far outweigh any negatives. I rate it a very competitive program -- though I would consider it for purchase primarily on its value as a wordprocessor, not for its ho-hum data handling capabilities. Its many advanced word handling features and formatting capabilities are just right for the serious user who wants his or her documents to have a crisp, professional appearance. For my software dollar, Fleet System 4 is an excellent value, my in-house wordprocessor of choice. For me, 'the fleet's in.'

(Note to prospective purchasers: Fleet System 4 is the most current product in the line. Its predecessor, Fleet System 3, does not have wordwrap or two-drive support, and is being redesignated an Apple IIc/IIe wordprocessor. Fleet System 2 is still being offered; it works with the 64 or 128, and it supports 80 columns on the 128. But it lacks many important features of Fleet System 4, most notably the thesaurus.)

Fleet System 4 is \$79.95 from:
Professional Software, Inc.
51 Fremont Street
Needham MA 02194

The latest versions available are:
Fleet System 4 wordprocessor version: 4.12
Fleet Filer version: 1.10



1581 DISK DRIVE

by Mark R. Brown, Tech Editor



After months of promises, Commodore has finally delivered their new, fast, high-capacity 3.5" disk drive for the C64/C128, the 1581.

The 1581 is similar in many ways to the Amiga 3.5" disk drive. In fact, our review unit came in an Amiga external drive case. The mechanism seems to be the same one used in the Amiga, though the controller electronics, connectors, and power supply are totally different.

PHYSICAL DESCRIPTION

The 1581 comes with its own external power supply, similar in size to the C64's power supply, which connects to the back of the drive via a small multi-pin round connector. The power switch is on the back of the 1581 case next to the connector. (I keep wondering when Commodore will put the power switch on the front where you could reach it conveniently.) Also on the back are two dip switches for changing the 1581's device number from 8 to 9, 10, or 11, plus two standard CBM serial buss connectors.

On the front you'll see that there is no disk slot latch lever. Instead, there is an eject button just below and to the right of the slot.

THE DISK

A 3.5" disk is a hearty thing. It's got a hard plastic case, and a metal cover protects the active read area of the disk. When you insert a disk in the drive and access it, the drive slides the cover to the side before it tries to read the disk. When you eject a disk, the cover slides back into place. This does not make the disk

indestructible; it is still vulnerable to spills and such. But it does make it harder to corrupt the disk media, and you never have to hunt for a sleeve to protect your disk.

The 1581 uses double-sided 3.5" disks and formats them to a total capacity of 808,960 bytes. A freshly formatted disk has 3160 Blocks Free. In a break from tradition, the 1581 uses IBM/PC-style MFM format rather than Commodore's traditional GCR recording. (Of course, you don't have to worry about that just to use a disk, but it *is* interesting.) The capacity and general physical format (80 tracks per side*) is similar to that of the Amiga, but the logical format of the disks is completely different; you cannot trade disks back and forth with the Amiga. On the other hand, the 1581 is programmable, much like the 1571, so it could be programmed to read Amiga disks. In fact, we have heard from one third party company that is working on just such a project right now. We'll keep you up-to-date as it develops.

THE CHIPS

The 1581 is a smart drive, just like all of Commodore's 8-bit system drives. Its brain is a 6502A, the same general type of CPU used in all CBM drives to date. However, its support circuitry is more powerful than anything Commodore has built before.

The actual drive controller is a Western Digital 177X floppy disk controller IC. It's a programmable controller chip, which raises all sorts of interesting possibilities. There is a 32K ROM operating system, the same size as the 1571's. Considering that this drive doesn't have to figure out two CBM formats and four CP/M formats, that's quite an operating system. It also has 8K of RAM, four times that of the 1541 or 1571. Why so much? Because the 1581 reads an entire track into drive RAM in one pass. This means much faster throughput, because the

system doesn't have to read and buffer just a few sectors at a time.

THE DOS

This drive finally breaks CBM's 144-files-per-disk barrier. The 1581 allows up to 296 files per disk. It will let you build a sequential file up to 802,640 bytes long, or a relative file of approximately 800K with a maximum of 65535 records.

The 1581 supports burst mode file transfers, just like the 1571. Because of this, you will achieve much faster load and save times with a C128 than you will with a C64, since the C64 doesn't support burst mode. (See table of LOAD and SAVE times.)

According to the 1581 manual, both the save-with-replace, and double-pointer-set relative file bugs have been fixed in the 1581 version of CBM DOS.

The commands supported by the 1581 are similar to those of the 1571. All the standard Commodore DOS commands (NEW, SCRATCH, VERIFY, etc.) work, as do the 1571 device # change, MFM format options, burst mode, and other esoteric functions. In addition, the 1581 has a very useful new addition.

SUBDIRECTORIES

Because of its capacity, Commodore wisely decided that the 1581 should support subdirectories (or partitions). Subdirectories let you place files under topical headings in the main directory so you don't have to look through hundreds of entries to find the file you are looking for. The Amiga and other computers with high-capacity drives all use subdirectories. Unfortunately, because the C64 and C128 were both built before the 1581, neither BASIC 2.0 nor BASIC 7.0 have commands to let you access the new subdirectory feature easily. You have to use the PRINT# statement to send the commands directly to the drive.

The format to create a new subdirectory is: PRINT#n,"/0:subdir.name, + CHR\$(starting track#) + CHR\$(starting sector#) + CHR\$(lobyte # of sectors) + CHR\$(hibyte # sectors) + ",C". The last two CHR\$() values specify the number of sectors you are preallocating in lobyte/hibyte format. There are some tricky limitations to allocating subdirectory space; the starting sector must be 0 (so why do you have to specify it?), the space allocated must be at least 120 sectors (or 3 tracks), the ending sector must be a multiple of 40 (in other words, you have to allocate whole tracks), and you must not allocate a block that includes track 40 (which is the directory track on a 1581 disk). Once set, the subdirectory remains the size you have set it.

LOAD AND SAVE TIMES

LOAD and SAVE times for the 99-block public domain BASIC program MONOPOLE. (all times are in seconds)

Computer	Drive	LOAD	SAVE
C128	1571	6	49
C128	1581	6	22
C64	1541	62	69
C64	1581	50	35
C64	1581	20*	

* Using the ZAPLOAD utility on the 1581 disk.
It took 15 seconds to load ZAPLOAD.

1581 Disk Drivecontinued

Unlike subdirectories in the Amiga, these do not vary in size as need demands. Once allocated, you `PRINT#n,"/0:subdir.name"` to select the subdirectory and `NEW` it before you use it. This could be a tricky business if you have not properly allocated or selected the right area--you could end up accidentally reformatting the whole disk! There are two new DOS error messages which return 02,SELECTED PARTITION,t#,s# if you have successfully selected a subdirectory, and 77,SELECTED PARTITION ILLEGAL,00,00 if you haven't, but I still don't like the idea of having to reuse the `NEW` command on a disk that may already contain valuable data--I would have felt safer if Commodore had come up with a new `SUBFORMAT` command. I strongly suggest that anyone using subdirectories on the 1581 allocate and format them *before* they store any data to the disk, just in case.

Once created, you `PRINT#n,"/0:subdir.name"` to get into a subdirectory. A subdirectory can contain further subdirectories, which must, of course, be allocated within the block of tracks allocated to the original subdirectory. You cannot step back out of a subdirectory one step at a time; there is no link back to the parent directory. You can, however, jump back directly to the disk's master directory with a `PRINT#n,"/"` statement.

Subdirectories appear on the master directory as a file of type CBM. To list the files contained in a subdirectory, you first must select the subdirectory with a `PRINT#n,"subdir.name"`, then `LOAD` and `LIST` the disk directory as you normally would, only this time you will get a listing with the subdirectory's name in place of the disk name, followed by a list of files in the subdirectory, and a `BLOCKS FREE` message for the subdirectory only.

Though the 1581's subdirectory capabilities aren't as powerful as those on the Amiga, and the C64/C128 cannot handle subdirectory functions except through DOS commands, it is an exciting new capability for CBM 8-bit drives, and one that is absolutely essential for handling large directories. I hope that now that

** Technical note: Strangely enough, the drive's operating system treats the disk as though it were single sided with 80 tracks of 40 256-byte sectors per track, though the disk is physically formatted as double-sided, 80 tracks per side, with 10 512-byte sectors per track. We assume the logical translation is done to provide a degree of file compatibility with the 1541 and 1571, which each use 256-byte sectors.*

1581 DRIVE

\$300.00

Commodore

Small and fast. The 1581 gives you 800K of storage on a 3.5" diskette. 8K of drive RAM for whole-track reading and burst mode data transfer make this Commodore's fastest serial drive yet. DOS supports subdirectories and fixes REL file, SAVE@ bugs. DIP selection of device #, separate power supply. Most useful with C128, but works with C64, too. -MB

Commodore has come up with an 8-bit subdirectory scheme, third party floppy and hard drive manufacturers will jump in and support it.

THE SOFTWARE

There's a disk included with the 1581, and it includes some nice utility programs. There is the usual DOS wedge, single and two-drive disk copy programs, a sample subdirectory program, a subdirectory full of Wayne Schmidt pictures and a slideshow that cycles through them, and a few demos. There is a `ZAPLOAD` fastloader menu program for the C64, but of course you lose extra load time loading in `ZAPLOAD`. The main lesson you will learn from this disk is just how much 800K of data is. Even with all the demos, there are over 2000 blocks free.

CONCLUSIONS

If you want lots of storage on a C64 or C128 you have three options:

- (1) A discontinued Commodore one-megabyte SFD-1001 (\$180) or dual one-megabyte 8250 (\$450) with an IEEE interface (\$120) and IEEE cable (\$25), which use 5.25" disks and operate at about 2-3 times the speed of a 1541.
- (2) A third-party hard drive with interface (\$700-\$1000) with a capacity of 5-20 megabytes and speeds of 3-60 times faster than a 1541, though most have at least some problems with commercial software compatibility.
- (3) The 1581 (\$300), with 800K of storage capacity, slightly faster than a 1541 on a C64, and up to 10 times faster on a C128.

The 1581 looks like it might be a good choice for the right applications, such as databases of medium size, graphics applications, heavy-duty wordprocessing, and C128 program development. If you are interested in transferring files back and forth to the Amiga, it will be an especially good choice once the software to do file translation with a 1581 becomes available.

The 1581 isn't going to set the world on fire, but it's a nice drive with some nice features. If you're in the market for mass storage, especially for a C128, give it a look.



Special INFO humor section
by Don Romero & Mark Brown

CHUMP

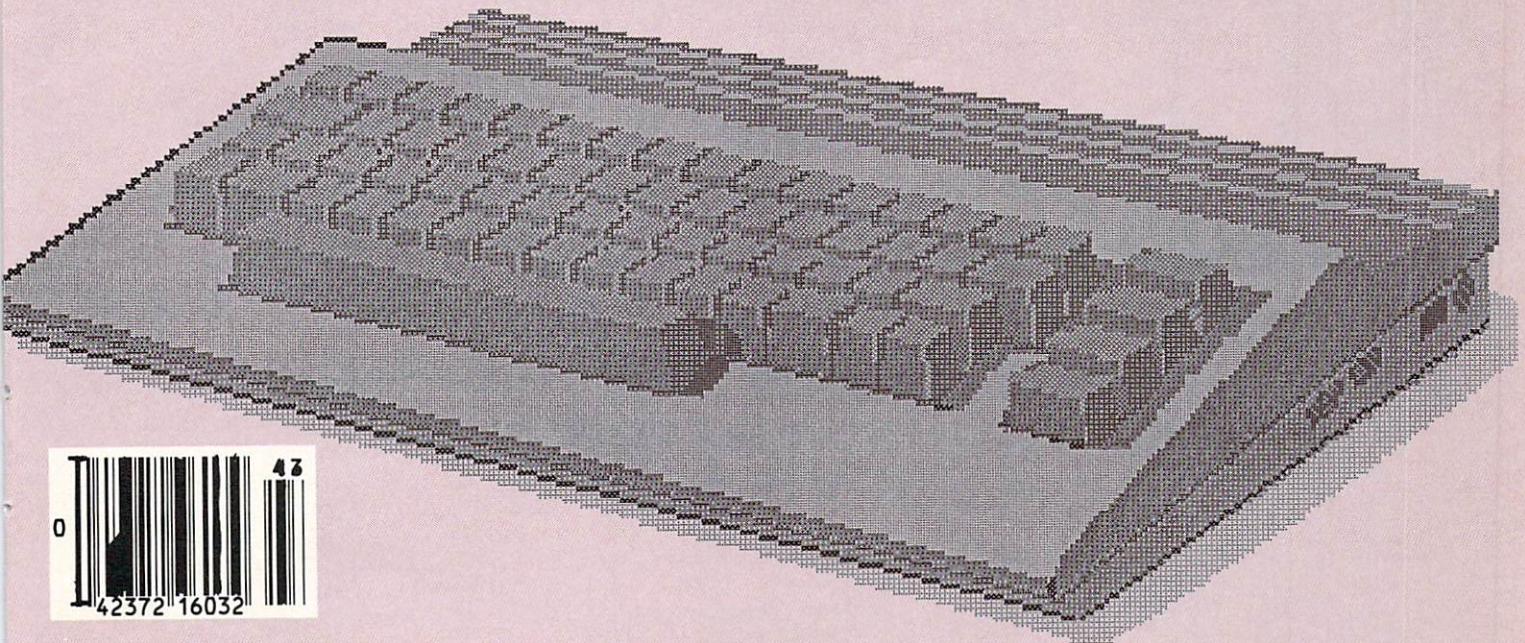
commodore hardware usurpers
maladroits & pundits

the Amazing

CG64C

*new style case!

*new higher price!



*NO new features!

Portions of CHUMP appeared previously in Word Wrap, the newsletter of The Western Indiana Commodore Users Group.

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99-114

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CHUMP Volume .01 cubic feet
CHUMP Magazine is published whenever we need the money. U.S. Subscription rate varies according to what we owe on the company credit cards. We really sock it to the Canadians, and if you live overseas, forget it! This is only a tax write-off and we don't need the hassles. All complaints should be sent to: Jack Tramiel, CEO Atari Corporation, Sunnyvale CA. After all, HE's the guy who started all this insanity!

Letters to the Editor



Have a question or comment?
Feeling brave? Address all
correspondence to:
CHUMP Magazine
PO Box 2300
Iowa City IA 52244

LETTERS

Disk Recovery

I have been working for two years on cross-referencing famous lines from Shakespeare's dramas using the shareware program FreeBase 64, but somehow a read error has occurred in the main index file and now the entire database refuses to load. Two years work down the tubes unless I can reconstruct that file...HELP! Any suggestions would be appreciated.

Professor James Oldenglish
English Literature Dept.
University of Iowa

*Sorry. There is nothing you can do. We suggest formatting the disk(s) and entering **Blast the Bard** from our June 1985 issue. Personally, it's more Shakespeare than I can stand, but at least it shouldn't take you two years to enter.* -Editor

User Port Panic

I've been using the CardBlo RS-464C interface with a Hayes modem and twice now it has blown my 6526 CIA chip. The interface is out of warranty and CardBlo is out of business. What can I do?

Tom Terrific
Coldduck IL

Since when am I David Horowitz? Try spitting, cursing, or pulling out your hair. Or get a real modem like the Commodore 1660. You ought to be able to get \$10-20 for your Hayes from some ignorant IBM PC owner. -Editor

Mister Know-it-all

When I first bought my Commodore VIC-20, yours was the first magazine that I subscribed to. As I've learned and progressed to the 64 and now the Amiga, I'm finding more and more that you guys don't know jack about computers, Commodore or

otherwise. That goes double for your stupid Letters section. But why even bother? I KNOW there's absolutely no way you're gonna print this.

Cubby Mouseketeer
Dean Martin City CA

Shows what Ozone Bozos like you know. Kiss off, scuzball!

-Editor

Screen Output Problem

I have written a routine on the C64 to sideshift data in a twelve-dimensional Gorbald Matrix to compute internuclear fieldlines in subatomic force matrices and display the results in realtime on a 1702 monitor. My only problem involves formatting twelve-dimensional output with only sixteen colors. Any suggestions?

Dr. Albert Einstein, Jr.
Dept. Of Programming Studies
CERN Nuclear Facility
Geneva Switzerland

Any five year old knows the answer to that one. From now on either ask a five year old, or take up playing stickball. I get really sick of answering all these insipid, ignorant, beginner's questions! What makes you think I have time for this? -Editor

Thanks Alot

Thanks guys. Thanks for nothing, that is! I followed your suggestions on surge protectors and the chips in my 64 are now splattered all over the inside of the case and my 1541 is plastic goo!

Boiling Mad
Pittsburgh PA

We received a lot of letters in a similar vein, including a number of lawsuit threats. Come on, people. That was our April issue. Says so right on the cover! April? April Fools? Get it? Our lawyers say you all don't stand a chance in court.

-Editor

ErrorChecker Problems

I tried using your ErrorChecker program to enter one of your games recently and found that it didn't work. ErrorChecker kept crashing. And when I tried to list it to see what was wrong, all I got was syntax errors!

So I asked a friend who knows a lot more about programming than I and he said there was NO WAY ErrorChecker could possibly work. What are you guys trying to pull?

Dr. Max Micro
Denver CO

Pull? We knew all that. Don't you think we knew that already? If you don't like it, don't use the ErrorChecker program any more. After all: nobody's twisting your arm, are they! -Editor

The Cheapest Chips

I'm afraid that one of the CIA chips in my C64 has blown. A friend of mine was plugging in a joystick and evidently didn't ground himself. In any case, the chip is history. I'd like to replace it, but I don't know where to get the chips. What can I do?

Col. Oliver South
Arlington VA

The least expensive way to get reliable working chips is to salvage them from another working computer - we suggest that of your so-called friend. The next time you are over at your friend's house playing with his computer, ask him for a snack, like fresh squeezed lemonade, a chef salad, and Beef Stroganoff. When he leaves the room, switch the machine off, whip out your phillips screwdriver and get to work. If the chips are not socketed, then probably the best strategy would be to simply swap motherboards, or even the entire bottom of the machine (motherboard included.) Chances are he won't notice the different serial number, or be able to trace it to you if he does. -Editor

Unrequited Love

I recently purchased a Commodore Plus/4 computer through an incredible deal on

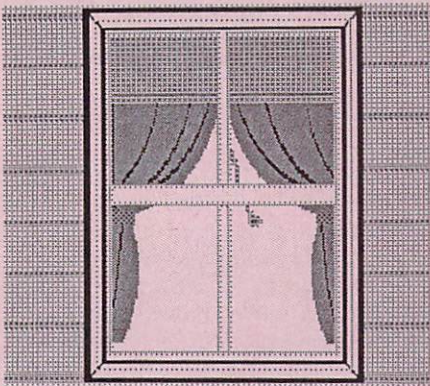
...continued on page 54

News & Biased Opinions

LOOK AND FEEL SUIT

At a March 11, 1987 press conference in New York, the Anderson Glass Company and Apple Computer issued a joint statement to the effect that Anderson would cease production of its insulated sliding windows until they can be redesigned in such a way as not to violate the copyrighted look and feel of the Apple Macintosh's window-based operating system.

According to the spokesman for Anderson, the new products would probably be hinged, although the Apple representative noted that changing



the shape of the windows and modifying their Open and Close gadgets may be all that is required to prevent Apple from taking further legal action.

Reportedly the threat of an injunction as well as a hefty lawsuit prompted Anderson to seek an out of court settlement, which is also rumored to involve cash as well as some home remodeling for key Apple executives.

"Thank God the Mac doesn't have doors!", said an Anderson spokesman.

TOM HEADROOM?

In a recent Wall Street Journal feature article, investigative journalist Scott Maze revealed that Thomas Rattigan, former President and CEO of

Commodore, is not a person at all, but is actually a prototype business management expert system with voice synthesis and recognition capabilities operating on a VAX 11/780.

According to the front page article, the tip-off was the unusual fact that Mr. Rattigan has granted numerous phone interviews, but has never been interviewed in person.

Maze claims the program is called Talking Operations Management or TOM for short. First developed for Pepsi Inc. in a version called JOHN (which was later acquired by Apple Computer) the more sophisticated TOM first went online with the European division of Pepsi and from there was adopted by Commodore.

Maze claims that much of the Amiga's confused marketing strategy can apparently be directly traced to the TOM's sophisticated Z-tree mega-marketing data structure which logically muddles through adjustments from one industry to another while maintaining the same basic business management paradigms.

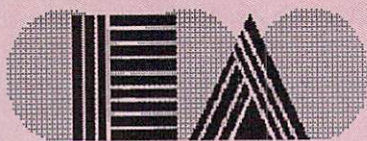
Rattigan's recent departure from Commodore was followed by rumors that the software had been acquired by a large Japanese auto manufacturer. A Commodore spokesman had no comment.

LOOK AND FEEL SUIT

A front page story in the February 27 Washington Post revealed that former president Richard Nixon is preparing legal action against the Reagan Administration, charging that this administration's Iranian arms deal crisis violates the "look and feel" of Nixon's Watergate scandal. According to the UPS report, Nixon aides are closely studying the recently released Tower Commission report for evidence of break-ins, hush money or tape erasures

during the 'Irangate' affair.

The new White House Chief of Bakers James Staff responded that Reagan's former staff had generally considered high level scandal to be in the public domain. But he conceded that an injunction against the President would cause grave national security problems, so that rather than face a lengthy court battle, a diplomatic solution would be sought if the issue comes to court.



BOLD MOVE BY EA

In a move that is sure to rock the home software industry, Electrical Artisans has moved to keep their extensive disk-based copy protection schemes, and drop the program code from their entire line of entertainment software. According to EA president Rip Hawker, only the high-res startup screens will be available on their disks from now on, along with 620 blocks of elaborate copy protection.

"With all the piracy now going on, it's hard to make a profit on games. We still plan to make money", said Hawker. "Legitimate users have thirty days to send in an extra \$20 for a backup copy of the real program. But by the time pirates break the protection only to find out that there isn't anything on the disks, the warranty will have expired."

LOOK AND FEEL SUIT

Xaviera Collander, known worldwide as "The Happy Hooker", has filed a suit against Apple Computer, Lotus Development Corp., Broderbund, and other unspecified defendants, charging them with violating the look and feel of the phrase "Look and Feel".

"I've been using that line on my clients for years," said Ms. Collander in an April 30 press release. She claims trademark violations under the "prior usage" clause of trademark law. None of the named defendants could be reached for comment.

Commodore's Big Bash for the A2000

by Diane LeFold

C.H.U.M.P. columnist



Chump

The A2000 rollout party wasn't quite the grand affair that Commodore orchestrated for the introduction of the first Amiga, but for Commodore aficionados and industry press alike it was the place to be. Neither Andy Warhol (God rest his soul!) nor Deborah Harry were in attendance, which in itself was almost worth the small cover fee Commodore charged.

Inside the Sleep-Tite Inn's Grand Ballroom and Cafeteria there were oodles of displays set up showcasing Amiga 2000s running with various cables, boards, boxes, and other high-tech stuff stuck in various ports. But not being very interested in that, I looked around to see who else had showed up for the affair and began mixing to make sure that they saw me.

I found Pete Backyard, Commodore's head of User Support, resplendent in a double breasted Hawaiian print business suit, chatting with, of all people, Neil Harass of Atari Corporation, looking rather less dapper in plain sackcloth and ashes. As I drew closer, I overheard the clever, cutting barbs being exchanged as the two corporate heavies crossed sabres.

"Do too!"

"Do not!"

"Do too!"

"Do not!"

"Too!"

"Not!"

Finding himself hopelessly outmatched, Harass slinked off to the buffet table, where he proceeded to stuff deviled eggs and ham sandwiches into an oversized doggie bag.

"What was that all about?" I asked, taking the arm of the obvious victor. "Were you comparing the new Amiga 2000

to the new LEGO ST?"

"No", said Pete, "He asked me for some spare change."

Over in the corner, I spotted John G. Devourhack, popular writer and reviewer for the Macintosh and a former fifth columnist for INFOWORLD, glancing desparately about the room.

"John!" I approached. "Are you here to see about the rumors of a MacBRIDGE expansion card for the Amiga 2000?"

"No", he shrugged, continuing his search. "I heard that there was going to be food. You haven't by any chance seen the girl with the pate plate, have you?"

It's unusual to see a shopping cart from a 7-11 at a computer intro, unless the man pushing it happens to be Jerry PoorNelly. Obviously the award-winning science fiction writer and Byte magazine mainstay was out to pick up a few things for Chasm Manor: A2000 (with the Bridge), an 8-meg expansion card, two hard drives. He was just about to nab one of the new long-persistence RGB monitors when Commodore's Jim Grossly confronted him.

"What are you doing with all this stuff, Jerry?" Jim inquired.

"Golly, Jim, I had some bare table space in between my Tandy Color Computer, Buffy, and my Sinclair 1000, Dopey", Jerry explained, "so I thought I'd come down and help myself."

"You can't do this! The A2000 is not a product yet," Grossly admonished.

"Ahhh, Jim", Pete Backyard interrupted. "But as of today the A2000 IS a product. That's what computer introductions like this are for."

"Okay", Jim conceded. "You might be right. I vaguely remember seeing a memo to that effect, but we don't have any cash registers set up just now."

"You expect me to BUY this stuff!" Jerry exploded incredulously. As Grossly grabbed for the A2000, PoorNelly screamed, "You can't take it back, I've already named it 'Lorraine'! Gee Whiz! I just spent three days downloading a U-Haul full of stuff that Atari GAVE to me, for gosh sakes! STs! Hard drives! Laser Printers! A Jacuzzi. Two sets of personalized flatware...."

Just then, I spotted a familiar shadowy masked figure skulking behind the punchbowl. It was Robert X. Crungely, the top secret expose specialist for INFOWORLD magazine. If I could find out his real identity, it might mean a big bonus!

Deftly, I feinted for the powder room, but when he turned his back, I rushed up from behind and grabbed desperately at his chapeau and mask. As I stole it away, I discovered the face of -- Larry Newvan, Jerry PoorNelly's occasional science fiction writing partner (e.g. *The Mold in Gott's Ear*, *Lucifer's Screwdriver*, etc.)

"What are you doing!" I choked off in utter surprise. "You're Robert X. Crungely?"

"Yes!" he shushed. "Please don't give away my real identity!"

"But why? Why the secrecy?"

"Jerry thinks he's such a computer hotshot", Larry explained. "And he thinks that I don't know anything. All because I asked him how to format a disk five years ago!! He's never let me live it down. But I'll get even. I can prove that I know more about computers than Jerry does!"

Just then, a waitress passed by carrying a tray full of dirty glasses in one hand and checking the nail polish on the other. Virtually in sync, we both exclaimed, "I can prove that SHE knows more about computers than Jerry does!" Then we laughed.

...continued on page 54

BIG BASH ...continued

"No problem, Larry", I sighed. "Your secret is safe with me."

Oh, the bitter sacrifices that a journalist has to make sometimes to protect her sources. Sometimes.

Strolling about, I came upon an excitable dude with a pearl handled joystick plugged into an A2000 with a Bridge and dual hard drives. The bushy mustache and the gold inlay initials 'B.D.' on the joystick were dead giveaways. It had to be INFO magazine's **Benn Dunnington**. From the sound affects that he was making with his mouth, he seemed to be playing Microsoft's Flight Simulator. But the screen display....

"What are you doing?" I asked quietly so not to startle him.

"I'm FLYING!" he replied without looking up. "Aaarrmmmm-mmm!"

"But isn't that DBASE III?", I asked.

Benn seemed to stall in midloop. He glanced at me, back to the screen, and then in his best Bruce Willis said, "Hey! That's RIGHT! But then where is Flight Simulator!?"

"I think that's it over there", I offered, pointing at another A2000 running Lotus 1-2-3.

"Hey, thanks!" Benn smiled as he disconnected his joystick and headed for the other Amiga. "I thought that scenery disk was pretty crude, but I figured 'Hey, it's IBM!'"

Toward the end of the affair, I happened to join **Deb Catholicson**, sysop extraordinaire on the GENIE network, **Mandy Skeleton**, noted Commodore writer, and **Penny Herringbone**, Commodore reporter-at-large, in a little girl-talk: multi-megabyte RAM expansion, DMA hard drives, 9600 baud modems and the long-range effect of all the look and feel lawsuits. Personally, it was just the kind of thing that makes it hard for women to be taken seriously at events like these.

Nobody comes here to talk about computers!

LETTERS ...from page 51

late-nite TV. At the time I didn't realize that there was so little software available for it. I also was a little disappointed by the poor sound quality and the lack of sprites. The keyboard is a little mushy, the cursor keys have no tactile response to them, and I can't plug joysticks into the joystick ports.

But despite the little flaws, I've grown to love my little Plus/4 and like just plugging it in and watching the screen light up. The free knives I got with it come in real handy, too. I'm sure that there are others out there just like me. What can you suggest to help solve the problems that we orphan Plus/4 owners have?

Lucy Ricardo
Copacabana NY

We suggest therapy. It's amazing what they can do with drugs these days. And we understand that Blue Cross/Blue Shield will cover most psychiatric treatments, including electro shock therapy if it is conducted on an in-patient basis. But get rid of the knives first.

-Editor

Mystery Pirate

Yo, I just thought I'd write to congratulate you guys on a really great magazine. I'd also

like to respond to that jerk who blamed pirates for software being so expensive. I get really sick and tired of people putting down pirates. Everybody pirates now and then, and those that say they don't are liars. Besides, all these software companies are making money hand over fist. They are liars when they say that they don't. Knowing that, I don't feel a bit guilty if I can make a few thousand dollars a year off these bozos.

I've tried writing to other magazines to express my opinion but my letters never get printed. So much for free speech, huh? I hope you guys are different.

(Name Withheld by Request)
Chicago IL

Dear Mr. Stallone, Though we don't agree with anything that you've said, we certainly agree that the rebels of the world, even those who live at 232 Washington St. in Chicago, deserve their day in court, so to speak.

-Editor

Identity Questioned

Dear Sir,

Is this a real magazine?

Shirley Feeney
Milwaukee WI

Shirley,

Is that a real city?

-Editor

BACK ISSUES

COLLECTOR'S ITEM!

Issue #1 : Original type-in programs Load Loader, Germ Welfare, SpeedScrap Wordprocessor! - Butterball on ML Disk Access - Random File Pointer Pointers - InDepth Reviews of Bunny Bop, Rain Detector, 5-Dimensional Spreadsheet from SomeTimesWorks, More!

ALMOST SOLD OUT!

Issue #2 : Original type-in programs List Lister, The Curse of John Boy, SpeedScrap 128! - Butterball on ML Code Excess - Input Inputs - InDepth Reviews of Death Squad, Rotorbeanie, Stamp-licker64, Spinoffer's Tax Evader, More!

HISTORIC 'LAWSUIT' ISSUE!

Issue #3 : Original type-in programs Number Renumberer, Duckie Love, SpeedScrap 80-columns! - Butterball on ML Outputting X's - Plus/4 music programs - Sys Command Cysts - InDepth Reviews of Mouseketeer, Dirty

Tricks, CardBlo's RS-464 interface, More!
ONLY 140,000 COPIES LEFT!

Issue #4 : Original type-in programs Reset Resetter, Fish Mart 64, PET SpeedScrap! - Butterball on the Shampoo Nexus - software color utility for the PET - FOR/NEXT Forays - VIC-II crashing - InDepth Reviews of Punky Portals, Friendly Fire 64, Mother Nuker VIC-20, Commodore's Word Machine, More!

COLLECTOR'S B&W ISSUE!

Issue #5 : Original type-in programs Port Porter, Pigeon Bombers!, SpeedScrap Bug Fixes! - Butterball on the Solar Plexus - software 8K for VIC-20 - ASCII No Questions... - InDepth Reviews of Pull Down, Mother Nuker 64, Morbid Mortician, Word Amateur, More!

NETWORK BUYOUT ISSUE!

Issue #6 : Original type-in programs Keyboard Keyer, Ambulance Chaser, Printer Output For SpeedScrap! - Butterball on Dodging Taxes - software Amiga emulator for the VIC-20 - InDepth Reviews of Pet Peevish, Dial-a-Snack 64, Broaderbun's Blind Date Manager, More!



THE ERROR CHECKER

Typing in magazine programs can be a real chore. There's all those numbers, and numbers and more numbers. Then there are all those funny looking Commodore characters. Your eyes get tired. Boredom sets in. You make mistakes, and when

you try to run your new program the computer crashes or you get a syntax error.

ERROR-CHECKER is an answer to that problem. Type NEW and then enter ERROR-CHECKER. Its designed to run on any Commodore computer

ERROR-CHECKER

WARNING: BE SURE TO USE CHUMP'S ERROR-CHECKER PROGRAM TO TYPE IN THIS LISTING!!


```
10 REM *****
20 REM      ERROR-CHECKER
30 REM      C.H.U.M.P. MAGAZINE
40 REM      RUNS ON ANY
50 REM      COMMODORE COMPUTER
60 REM *****
70 POKE 53280,2:POKE 53281,2:POKE 646,1
80 PRINT CHR$(147)"ERROR CHECKER"
90 INPUT"STARTING ADDRESS (DECIMAL)";SA
100 GETA$:IF A$="" THEN 100
110 IF A$=CHR$(133) THEN 200
120 IF A$=CHR$(136) THEN 300
130 GOSUB 400:GOTO 100
140 END
200 PRINT CHR$(147)"STARTING OVER..."
210 FOR I= 1 TO 5000:NEXT
220 GOTO 70
300 PRINT CHR$(147)"ALL FINISHED?..."
310 PRINT:PRINT:PRINT
320 PRINT"BE SURE TO SAVE YOUR PROGRAM BEFORE YOU
RUN IT."
330 FOR I=1 TO 3:POKE SA+I,0:END
400 PRINT CHR$(147)"YOU ENTERED THE FOLLOWING
CHARACTER..."
410 PRINT:PRINT A$
420 PRINT
430 PRINT"ARE YOU SURE THAT'S THE RIGHT KEY? (Y/N)"
440 GET B$:IF B$="" THEN 440
450 IF B$="Y" THEN 500
460 IF B$="N" THEN 600
470 GOTO 440
500 PRINT"GOOD JOB! WAY TO GO!"
510 FOR I= 1 TO 5000:NEXT
520 POKE SA,ASC(A$):SA=SA+1
530 RETURN
600 PRINT"FUMBLE-FINGERS! YOU NEED YOUR GLASSES
CLEANED!"
610 FOR I= 1 TO 5000 : NEXT
20 RETURN
```

How To Type In CHUMP Programs: Using the keys on the keyboard, type in the letters and numbers corresponding to the letters and numbers in the program listing. Be sure to use CHUMP's new ERRORCHECKER program to aid you in typing!

with any version of Commodore BASIC, except for the Amiga. (The Amiga version is being beta tested and due for release Spring of 1987 - Editor.)

HOW THE PROGRAM WORKS: When you run the program, the screen will turn red and prompt you for the starting address of the program you wish to enter, which is included with every program listing. Enter the number (usually 801) and hit RETURN.

Now just start typing in the program you want. After every keystroke, the program will prompt you to check and make sure that's the key you REALLY wanted to press. If so, the program will offer kudos, POKE the ASCII value into memory and await your next keystroke. If you pressed the wrong key, you'll get the raspberry. Press the <f1> key to start over. Or press <f7> to quit ERROR-CHECKER and save your finished program to disk OR tape. (Not all magazine typing checkers let you do that!)

Its that simple! Enjoy. 

COMING SOON IN CHUMP!

COMAL CONUNDRUMS

by Len Linseed

LO-RES SOUND ROUTINES

by Dale Report

ML FOR THE UDDER BEGINNER

Milking the KERNAL Routines

by Jim Butterball

ROUNDHEADS CONSTRUCTION SET

Create your own favorite hi-res bimbo or hunk!

by Richard Minefield

A Type-In Program for the C64!

THUMBSTEXT 128

A wordprocessor for the compleat idiot.

by Tim Sickbrat

A Type-In Program for the C128!

SLOP'N'BOP

Protect your frosty cola from rival street gangs.

by Paul Mountgrumbly

A Type-In Program for the Cray III!

WARNING!

OVERLOAD!

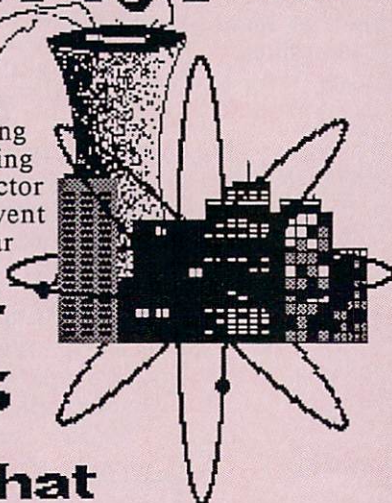
!! COOLANT FAILURE !!

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wall or a backup cooling
system you have to bring
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under control and prevent
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Cincinnati OH*

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*Mikhail Gorbachev
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"Loads really fast because the code is so short!"

*Gwendolyn Lacrosse
Paris TX*

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*We bring you the best disaster simulators
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3. Works with 1571, MSD, FSD, Indus, and Enhancer 2000 disk drives (sort of)
4. Works with two drives (well...)
5. Special Track & Spectre Editor.
6. Documentation in a quaint colloquial dialect of English!
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We're not one of those pump-out-an-ad-on-
every-page magazines. Profit is NOT our
middle name. (Can you spell T-A-X S-H-E-L-
T-E-R?) So we can afford to give you our very
best support for your Commodore computer.
(Or, miss a deadline or two if we feel like it.)
How can we make such an offer? It's easy:
there's GOOD money in mailing lists these days.

WE'LL PAY YOU TO SUBSCRIBE!

Just send in the order form below with your
name, address, city, state, zip code, make of
computer and the number of major credit cards
that you own and we'll, er, rush your first issue
to you within a reasonable length of time.
(After all, you ain't payin' so forget
complainin'!)

NO! Keep your %&+* money and your ;%#!
magazine.

YES! Please hurry and rush my free
subscription and check for \$5 to:

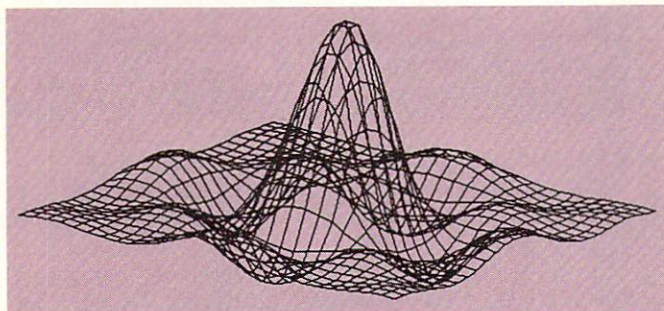
Name _____

Address _____

of Major Credit Cards _____

TDI MODULA-2

by Warren Block



There aren't many alternatives to the C language for programming the Amiga. To even be considered for serious programs, an Amiga language must produce small, fast object code; allow access to the system routines and hardware; and have a large amount of modularity. TDI Software's Modula-2 compiler fills all these requirements admirably well.

If you know Pascal, Modula-2 is instantly familiar (not surprising, considering that both languages were developed by Professor Niklaus Wirth). Practically all of Pascal's structured features exist in Modula-2, although many have been improved (for example, the IF statement no longer needs BEGIN and END delimiters around blocks of code). However, Pascal was designed for the purpose of teaching computer programming. Modula-2 is different in that it was created for "systems" programming; low-level tasks are easy to accomplish, and the language doesn't isolate the programmer from the computer's hardware (as Pascal does). In addition, programs in Modula-2 are composed of small, independent modules. This can make program development much easier, because a module that has been written and debugged once can be imported into any program. After a while, the programmer has a complete toolbox of ready-to-use modules.

TDI'S MODULA-2 PACKAGE

TDI Software sells three different versions of their compiler: Regular, Developer, and Commercial. The Developer version is described in this review. It includes utilities and source files that the Regular system lacks, but does not include the source code to all of TDI's included modules, which comes only with the Commercial version.

The package consists of two disks, a 334-page manual, an updated module cross-reference list, and some correction and addition sheets. After following the set-up instructions, I managed to get a short test program compiled, linked, and executed with no difficulty.

TDI includes a large number of precompiled modules which give the programmer access to

the Amiga's custom hardware and software, and correspond roughly to the "include" files used by C compilers. Almost all of the features of the Amiga are accessible through these modules, and programmers can add new ones to the library if needed.

If errors are found during a compile, the compiler writes out a file containing information about the location and type of the errors. A program called M2Error then reads the error file and displays the error-causing locations in the source file. Since M2Error runs in its own window, it multitasks quite well with most editors. This makes it easy to edit your source file while the errors are displayed at the same time.

Once a program has been compiled without errors, the linker is used to make it an executable program. A nice feature of TDI's linker is the option to remove unneeded procedures from the object code it generates. In many situations, using this option can cut the size of the object code in half.

COMPARING MODULA-2 TO C

There are several factors to consider when deciding on a compiler. Two very important ones are the size and speed of the object code that is produced. In this department, TDI's product fares well against the competition.

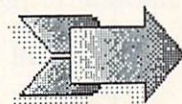
For example, consider a demo animation program that was written in Lattice C; the size of the executable code was 15172 bytes. I translated it into Modula-2, added the capability to quit by clicking the mouse on the "close window" gadget (the original could not be stopped), and compiled it. Its size dropped to 4876 bytes--less than a third of that generated by the C compiler.

In most cases, TDI Modula-2 produces object code that is comparable to the output from the better (read that: more expensive) C compilers. It is small and fast; what more could one ask for?

DOCUMENTATION

Well, one could certainly ask for more instructions. In TDI's magazine advertising, they mention a 350-page manual. The manual that comes with the package is indeed almost 350 pages, but only the first 55 of those pages are information about using the compiler and linker; the rest is merely a listing of the definition modules included with the system. It is necessary to know what is in the modules to use them, but the listings hardly qualify as 200 pages of a manual.

The information that is given about using the system is rather sparse, too; it's a good thing that the compiler and linker are so easy to use.



PROBLEMS

The biggest problem with using TDI Modula-2 on the Amiga is not TDI's fault: since all the development work on the Amiga was done in C, all the examples in the ROM Kernel Manuals are in C. For struggling Modula-2 programmers, this creates the double whammy of learning Modula-2 while learning C to understand the examples, which are necessary to use the features of the computer. After a while, you start to understand C, but if you want to develop programs in any language on the Amiga, get a C reference book.

There are problems with the compiler, of course (no compiler exists that doesn't have problems), but these are relatively few. Most are design decisions, rather than actual bugs. For example, the CASE statement won't work with long integers. You can program around this with IF statements, but it would be much easier and clearer if the compiler was simply modified to allow CASE to accept long integers.

There were some other problems, too: there were no examples showing the use of the IFF routines included with the package, and the routines themselves were "untested" (TDI's advertising had mentioned these routines, although the word "untested" was never printed). Additionally, the compiler wouldn't function correctly when I replaced my computer's MC68000 processor with an MC68010, crashing at the end of every compile.

In a program I was translating from C, the compiler kept running out of heap space. After a call to TDI's technical support line, a listing for a compiler patch arrived in the mail. The phone support I have received from TDI has been very good.

The Modula-2 system described above is version 2.20. Just days before the deadline for this review, I received TDI's upgrade to the compiler: version 3.0. This upgrade is quite impressive. The size of the compiler has been reduced, and its speed has been increased.

The IFF routines included with the new version of the system now work, and include examples.

Instead of M2Error, there is a full-screen editor that functions in the same manner. The editor reads the error file produced by the compiler; pressing the Help key jumps the cursor through the source program to the offending locations. TDI also sells the source code to this editor, so it could be modified to suit individual tastes.

A new addition to the system is a post-mortem debugger, to examine the remains of programs that have met with an untimely end, and

TDI MODULA-2 COMPILER

\$99.95 TDI Software ****

Version 2.2 was good, 3.0 is very good. A full-featured compiler with all the necessary extras to make it useful on the Amiga. The modules included are good, the compiler is good, and the linker is excellent. Object code size and speed compare well with the best C compilers. Not copy protected, and great phone support. There is, however, a shortage of Amiga-specific example programs. -WB

(hopefully) diagnose the cause of their deaths.

New modules have also been added to the system, adding features and making some existing ones easier to use.

The new compiler seemed to have no problems running on an Amiga equipped with an MC68010 processor, although I did have some trouble with the editor in this configuration, so it is probably safest to leave the Amiga's normal 68000 in place.

Apparently the manuals to accompany the new compiler have not yet been completed--at least, mine hasn't arrived yet. Hopefully it will include more useful information than the previous version.

CONCLUSIONS

The modules included are good, the compiler is good, and the linker is excellent. The disks are not copy protected, a feature that influences every software purchase I make. Object code size and speed compare well with the best C compilers, and phone support from TDI is very good. On the other hand, there are the problems of lack of examples of Amiga programs in Modula-2 and the design decisions of the compiler, which may not agree with your preferences.

Version 2.2 of of TDI's compiler was good. Version 3.0 is very good. It is a full-featured compiler with all the necessary extras to make it useful on the Amiga. To complete the package, you will need a C reference book, a Modula-2 tutorial or reference guide, and lots of patience. In addition, I recommend TDI's \$25 disk of examples. On this disk are several translations of programs in the Amiga Rom Kernel Manuals and some original programs demonstrating the use of the system. It will make the transition from C to Modula-2 easier, and I recommend that transition heartily.

TDI Modula-2/Amiga requires 512K and 1 drive, additional memory and 2 drives recommended.

Regular.....\$99.95
Developer.....\$149.95
Commercial.....\$299.95

From TDI Software, 10410 Markison Road,
Dallas, TX 75238, (214) 340-4942.



INFO

Reader Mail

...from page 19

Mail From: Augustine QuantumLink
Date: Sunday 1-Feb-87 20:37 est

I would like to commend you for the fine magazine you put out. It is so cleanly and neatly put together, that you might not believe its all done on personal computers. But I have one major beef with you. Last issue (#13) you poked fun at The Guide for having Timothy Leary as a columnist, and then you printed an article that seems to be of his genre. I am referring to RJ Mical's ridiculous story on the creation of the Amiga. I expected a good inside report on the goals the design team started with, and how they worked to bring them to life as a machine. Instead I read a lot of nonsense about joyboards, and Zen meditation games: a load of hi-tech mysticism. I don't mind funny stories, but please don't give them such titles as How We Created the Amiga Computer.

RJ claims to this day that that really was the way the Amiga was created. What's even more incredible, everyone else on the original design team backs him up! We can't prove otherwise. I know the Joyboard existed (because I actually owned one once) but there's really no way we can prove or disprove the rest of his story unless someone from the design team breaks down and tells another version. When they're ready to talk, the pages of INFO will be made available to them.

-Mark & Benn

Mail From: WadeH QuantumLink
Date: Sunday 29-Mar-87 23:35 est

Hello dere ! Just thought that I would drop you folks a line to let you know that I feel that you produce the BEST Commodore mag today. And the fact that you do it with Commodore equipment just further serves your credibility. The only problem is that I devour your publication and then it leaves me hungry for more. I certainly hope that your circulation zooms up to the point at which you will be able to go monthly without losing any weight in pages and content. Thanks for the good reading.

Thanks for writing the obligatory INFO is Great letter for this issue, Wade. We get a LOT of letters asking us to go monthly. PLEASE don't send any more. Every time the staff sees them they break down babbling for hours. Thanks.

-Mark & Benn



INFO

DOUBLE-TAKE

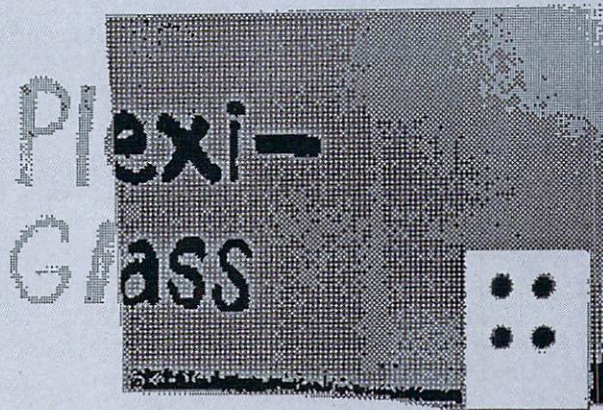


JITTER-RID is a plastic filter which may be attached to your Amiga monitor with Velcro strips (supplied), and which reduces the flicker associated with interlaced Amiga displays.

JITTER-RID is made from ordinary 1/8" grey-smoked acrylic with nicely rounded corners.

from IDEAS CREATED/407 Kickerillo Dr./Houston/TX/77079

PRICE: \$14.95

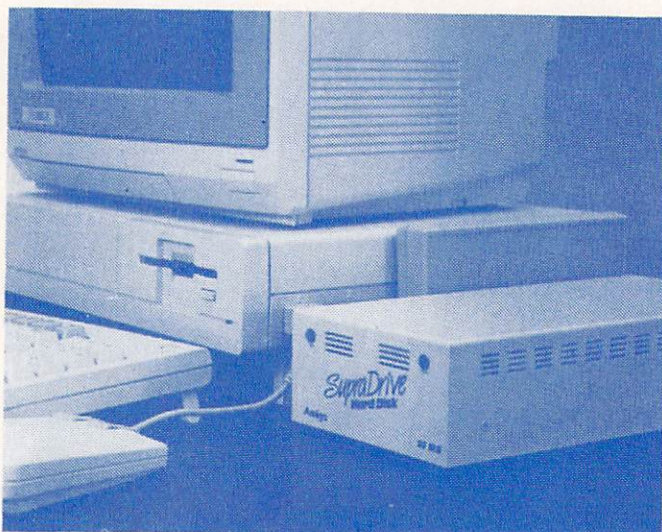


Ordinary 1/8" grey-smoked acrylic plastic sheet (with square corners) is available from most small plastic shops (check your yellow pages) for under \$3.00 (including cutting charge). Add \$1.50 for adhesive-backed velcro tabs or strips (found at most drug or dime stores). Does equal job of reducing ridding "jitter".

UNDER \$5.00

SupraDrive

by Mark R. Brown, Tech Editor



HARD TIMES FOR HARD DRIVES

We've taken a look at several hard disk drives for the Amiga and found them all lacking in speed. In hours of conversation on the phone and online with Commodore officials, users, and third party Amiga developers of both hardware and software, we've come to the conclusion that the major culprit in the slow speed of Amiga hard drives is AmigaDOS. There's a software bottleneck the the DOS that limits data throughput no matter what you do. While we gather that it is possible to get around the bottleneck by writing your own hard drive I/O routines, if you do so you are apparently destroying any chance of having the drive behave "normally" in normal use situations. While we have heard that one of the developers from MetaComCo, the originators of AmigaDOS, is working on a new high-speed compatible DOS for hard drives that will allow up to a 10-times speed advantage, for now it would seem that Amiga owners are stuck with hard drives that operate only 2-3 times faster than a floppy. With that out of the way, let's move on and take a look at Supra's 20-meg hard drive for the Amiga.

GETTING PHYSICAL

The SupraDrive's cream-colored steel case is slightly narrower than the Amiga's external floppy drive, and about two inches longer. It contains a 3.5" 20-megabyte hard drive mechanism and an integral power supply. There is no cooling fan, but it seems to draw enough ventilation through its vents to keep it running cool.

This unit interfaces to the Amiga via a box on the expansion buss. This box (also steel) is just

exactly the same color, height, and depth as the Amiga, which makes it look good sitting next to your computer. Besides the drive controller electronics, the interface box houses a battery-backed clock. There is also room in the box to add up to 2 megs of expansion RAM, which makes for a nice, neat expansion setup.

SETUP

After plugging in and powering up, you'll need to install some driver software on your Workbench disk to make the Amiga recognize that the SupraDrive is there. Unlike some hard drives, this is not an autoconfig unit. There is an executable program which adds the SupraDrive to Workbench's mountlist, and you'll also need to copy a device driver to the *devs* drawer. This is not a whole lot of work, but it does mean that autoboot disks and 'untouchable' disks cannot be made to recognize that you have a hard drive connected to your Amiga. This is unfortunate, but it's probably not critical since the major advantages to owning a hard drive come from their utility with applications software, and it's usually only games that cause your Amiga so much grief.

Once the proper files are installed on your Workbench, you can reboot and your Amiga will recognize the SupraDrive.

SOFTWARE

There is not much in the way of software on the floppy supplied with the SupraDrive. In addition to the required drivers, there is an executable file to park the drive heads when you need to transport the drive, utilities to set and read the onboard clock, and one to format the hard drive.

HOW IT WORKS

The SupraDrive comes already formatted with Workbench loaded in, but you may want to reformat it anyway. One of the best reasons for doing so is that you are allowed to reformat the drive into up to five separate partitions.

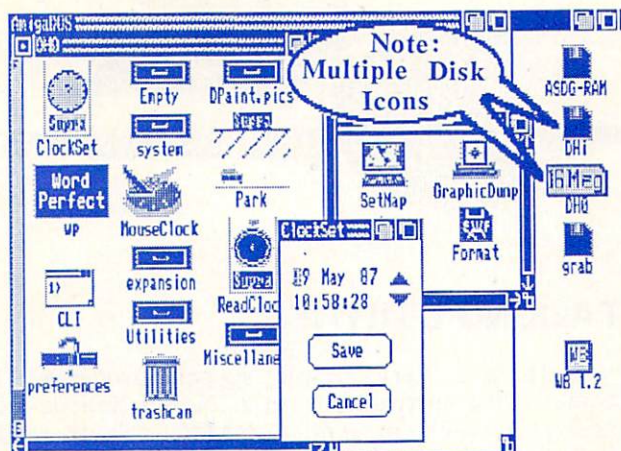
With the drive partitioned, AmigaDOS sees the SupraDrive as up to five different hard drive devices: *dh0:*, *dh1:*, *dh2:*, etc. Each is set up with as much of the 20-megabyte capacity of

SUPRADRIVE 20 MEG DRIVE

\$995

Supra Corp

3.5 inch hard drive with integral power supply in a compact, attractive steel case. The interface box plugs into the expansion port. The box is short and good-looking, and contains a battery-backed clock with space to add up to 2 megs of expansion RAM. Drive is not autoconfig, requiring that you copy driver software to your Workbench disk. Drive can be configured as up to five separate partitions. Reliable, compact, a good unit.



the physical hard drive as you want to allocate. I have reformatted ours as two logical units. dh0: has a capacity of 16 megabytes and serves as a permanent file for useful utilities and data files. dh1: is 4 megs of transient storage. I use it for file copying and temporary storage of data and special utilities. I can safely delete everything in dh1: at the end of a session and know that I will have 4 megs of clean hard disk drive space waiting for me the next time I boot the system.

It's even possible to divide the SupraDrive's 20 megs into two logical drives of 10 megs each, and use one side to back up the other. Of course, this method doesn't save your donkey if the whole drive goes down, but it will serve as insurance against the occasional hard error or accidental file deletion.

AN EVALUATION

We found the SupraDrive's performance to be comparable to that of the other Amiga hard drives we've tested. It's about 2-3 times faster than a floppy, as we've come to expect from Amiga hard drives in general. It is reliable, quiet, and hasn't given us any grief to date. My only objection is that it does not autoconfig on powerup, and you have to copy the proper drivers to any Workbench disks you want to be able to boot your system with. Physically, this is an attractive unit that looks good sitting next to your Amiga, and the ability to add expansion RAM inside the drive controller box is an extra added touch that will help to keep your system working efficiently and looking good.

The SupraDrive 20 Meg hard drive, \$995 from:
Supra Corporation, 1133 Commercial Way,
Albany OR 97321, 503-967-9075.

Optional Internal Expansion RAM: 1 meg \$399
2 meg \$649



ARE YOUR COMPANY'S PRODUCTS IN INFO?

If your company is producing software or hardware products for the C64, C128, or Amiga, you need to let INFO readers know! INFO's editorial emphasis is not on type-in games and programming tips, but on news and new product information... INFO is where Commodore owners look for informative product news.

INFO offers three ways to tell our readers about your products:

(1) The New Products section. Send us your new product announcement and a photo (if possible). If it's something of interest to Commodore owners, we'll let our readers know in New Products.

(2) The Product RoundUp. Twice a year, INFO publishes the definitive guide to Commodore products. Our last RoundUp issue listed over 2200 hardware and software products. If you make or market software or hardware for the Commodore market, we'll list it here. Free!

(3) Product Reviews. We publish more reviews than any other Commodore magazine. More importantly, we publish *honest* reviews.

A review in INFO can mean a lot for your product and your company. We also star-rate hundreds of products in our Product RoundUp issues. It's a great way for the Commodore buying public to see how your product stacks up against the competition.

So send us your press releases, catalogs, product information sheets, and products for review. Let Commodore owners know about your products in the pages of a magazine they know and trust: INFO.

-Mark R. Brown, Senior Editor
-Benn Dunnington, Publisher

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Iowa City IA 52240

Carol has asked me to remind you of a *fourth* way to let INFO readers know about your products: ADVERTISING! In an ad, you can tell the story of your products in your own way. Call Carol at 319-338-3620 for details.

Let's Hear it FROM the Amiga!

When you endow a powerful and imposing computer with some human characteristics, it becomes less formidable and more approachable. That's precisely why add-on speech synthesizers are available for most personal computers.

The Amiga doesn't need an external speech synthesizer because the ability to translate text to speech is already built in. It's available right out of the box. And the routines necessary to make programs talk are provided right in the operating system.

Many Amiga programs will talk to you. Rather than list them all, here's a look at how speech synthesis is implemented in a representative sample. I hope this article will help you to decide whether hearing your programs speak makes your Amiga a more valuable tool.

TALKING PROGRAMS

Some talking programs let you tailor the Amiga's voice parameters to a speed, pitch, and tone of your preference. Others simply use the "default" voice.

The Amiga will say anything you toss at it in ASCII but, due to the vagaries of English pronunciation, the real question is whether or not it says it right. "Creative" spelling helps, as long as the author doesn't expect a human to read the same text on the screen. Phonetic spellings produce the most correct pronunciation. Try your hand at using phonics in Amiga BASIC if you're interested, check out the program called *Announce* on the *Gizmoz* disk, or just type SAY from the CLI.

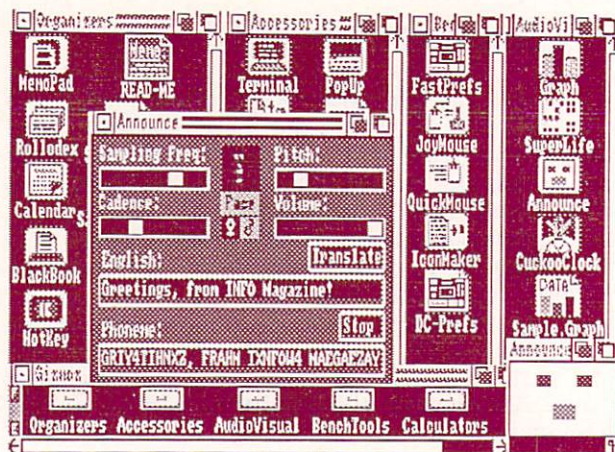
Besides being fun, talking programs can assist your productivity. Audible keyboard echo provides feedback that can help you type more accurately. Speech can also provide audible feedback from more complex data: words, numbers, or an entire report. Speech can help you find mistakes by reading your stuff aloud while you compare what you hear with your original data.

Then too, spoken instructions are attractive to kids and people who have trouble reading, and can make it possible for them to use software they couldn't use otherwise. Speech can also be helpful to the visually handicapped, but that requires a user interface that is audible from boot to quit. *EarType* is the only program mentioned in this article that meets that description.

TALKING UTILITIES

SayIt is a very simple speech program. It comes with instructions in a Notepad disk file and is written in Amiga BASIC. *SayIt* reads text files out loud from disk using the Amiga default voice. It is configured for a single drive system and disk directory access isn't built-in. If you want to learn how to manipulate speech from BASIC, check out this program.

Gizmoz (V2.0) from Digital Creations includes a little 18K program called *Announce*. Like other programs on the unprotected *Gizmoz* disk, you can move *Announce* to your own disks. It will read text files out loud or say phrases you enter. English is automatically translated into phonemes (which you can then edit). You can also alter cadence, pitch, sample frequency and volume with on-screen sliders. If you run *Announce* from the CLI, these attributes can be altered via abbreviated commands that precede file names. [The *Gizmoz* disk also included lots of other handy utilities. -Ed.]



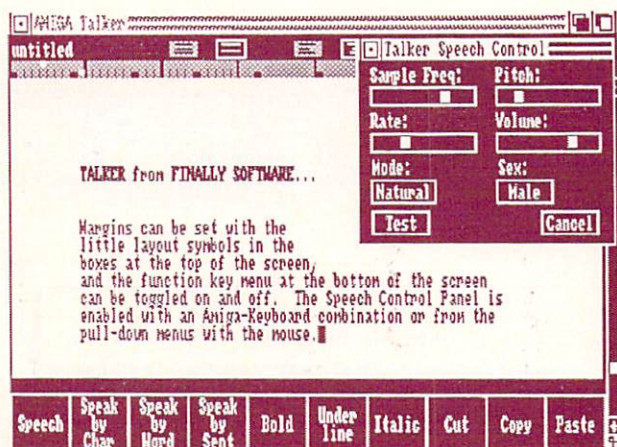
Gizmoz Announce utility.

SPOKEN WORD PROCESSING

Talker (from Finally Software) is an introductory word processor with speech. It's Amigaized with pulldown menus, keyboard command shortcuts, and mouse support. Onscreen rulers and icons help you format text

for output, and it has simple cut, copy, paste and search commands. Talker uses Amiga's Topaz font and displays text in What-You-See-Is-What-You-Get manner. A pulldown menu displays a voice control panel that lets you customize the speech. Function keys and Amiga-key combinations select speech by character, word, sentence, paragraph or an entire file. The manual is well-written in large type with lots of screen shots.

Eartype, which initially appeared on JumpDisk (an Amiga disk-based magazine) was devised especially for sight-impaired users. I blindfolded myself and tried using both of these talking word processors. Eartype doesn't have pulldown menus and uses the function keys for all commands. After listening to its spoken instructions a few times, I was quite successful entering text and using the function keys to find my place. Search and replace can even be used effectively this way with practice. Eartype prompts you vocally for printer output options and has an all-important automatic disk save in case the program crashes. Best of all, it is freely distributable. With permission of JumpDisk, I uploaded it to American PeopleLink and CompuServe and if you can't get it there or from a BBS or user group library, contact JumpDisk. They'll provide you with Eartype on disk for only \$3 by mail in the U.S., \$4.50 elsewhere.

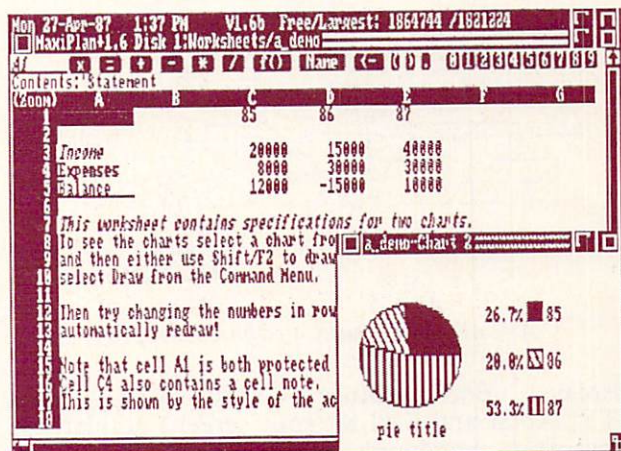


A-Talk talking terminal program.

WORDS AND PICTURES

The InfoMinder database manager from Byte by Byte can display color graphics on the screen along with spoken descriptions. Using utility programs on the program disk, you arrange and compile previously constructed files of text and IFF graphics and display them sequentially or select specific pictures via menus. Byte by Byte plans to have a professional laser disk version

available later this year. Although InfoMinder uses only the Amiga default voice, you can arrange to have spoken words use phonics while displaying real text in English. You can get some nice results fairly quickly with InfoMinder; I managed to put together a presentable display using DPaint screens and original text in one afternoon.



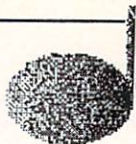
MaxiPlan Plus.

TALKING SPREADSHEET

MaxiPlan Plus is an extensive, flexible, full-featured Amiga-ized spreadsheet that I think is more powerful and easier to use than Lotus 1-2-3. Some of the features that help you get a handle on complex projections are color-coded entries (when you're in the red, financially speaking, you're REALLY in the red with MaxiPlan), generous 5-line file notes attached to each cell, a manual with an index and good use of voice synthesis. You can configure the Amiga to speak in a manner that's best for you to understand with the MaxiSet voice customizer. Using the keyboard echo feature, you can have MaxiPlan repeat out loud each step of your input as you enter it. You can have a range of data read aloud while you check it against your original figures. It's like having someone there with you proof reading.

AUDIBLE COMMUNICATIONS

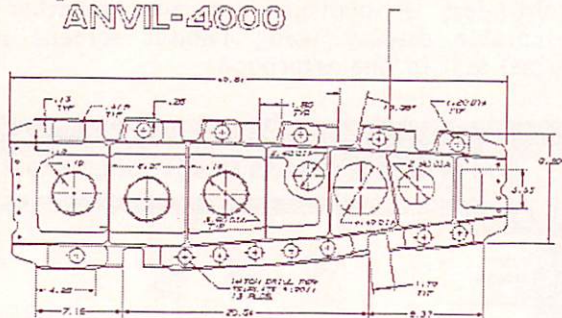
A-Talk and A-Talk Plus from Felsina are two telecommunications programs that use the default Amiga voice to speak text as it comes or goes online. The voice parameters include a nifty filter that stops everything except words, passing only the letters and numbers to the voice synthesizer. The major difference between A-Talk and A-Talk Plus is that the latter supports Tektronix 4010/4014 and 4014-1 emulation using special fonts and 132-column hires



continued

A-Talk Plus

ANVIL-4000



from MCS

A-Talk Tektronix graphics display.

displays. Both feature VT100, VT52, H19, TTY, ANSI and TALK (split screen) emulations. I've often wondered if the RS-232 "standard" really stands for 232 possible combinations, and if it does, A-Talk and its Plus version may address them all.

I use A-Talk Plus V1.1B. A-Talk is Intuition based with mouse pull-down menus and Amiga-key combination shortcuts, and more file transfer, display, and communications options than you can shake a stick at. You can even put macros on the function keys and build auto log-on scripts and HEAR your progress as you sign onto a system.

TALKING LANGUAGE TUTORS

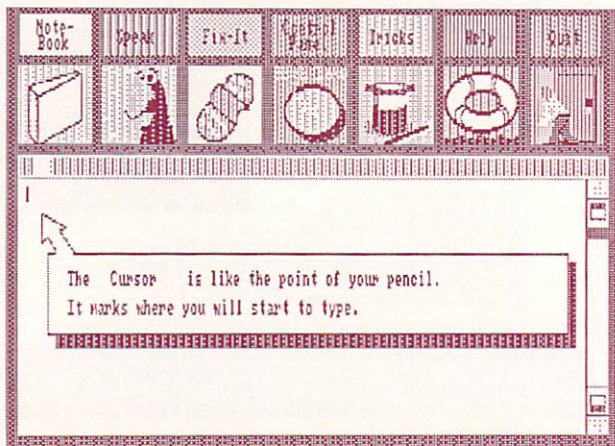
Learning a foreign tongue with a talking program sounds like a natural until you realize that computer speech isn't very good inflection and pronunciation. Artworx is about to introduce a line of language tutors and while I haven't seen them yet you might be interested in looking into one before your vacation. German, Italian, French, Spanish, Portuguese, Russian and Dutch tutors should be available by the time you read this. And Eclipse Data Management's Spanish Tutor, KwikSpeak, is undergoing an upgrade that will be available in May or June.

AUDIBLE TEACHERS

Until recently, First Byte's series constituted the only educational programs available for the Amiga. I think they were all translated from the Macintosh, and while there's nothing inherently wrong with that, they don't use the Amiga to full advantage. They all talk (sometimes not much) and have some colorful

graphics, but my "play-testers" (my own and several neighborhood kids who are intimately familiar with many C64 and Apple programs), in general find them clumsy to use. First Shapes (for pre-school through primary grade levels) matches shapes and toys, Mathtalk (primary through elementary grades) covers basic math concepts, Kidtalk (for pre-school through junior high) is a "talking notebook" that lets you tailor voice parameters, and Speller Bee (pre-school through junior high -- my gang's favorite of the bunch) lets you build lists of spelling words.

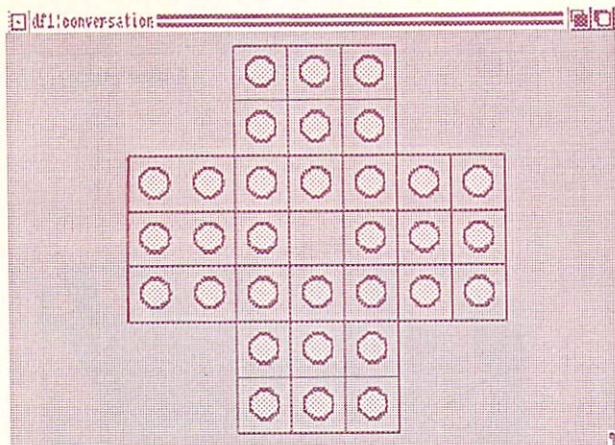
Unicorn Software now has four talking educational programs with others scheduled for release later this year. This series DOES use Amiga features extensively. Animal Kingdom (a four-player game for 6 to 12 year-olds that introduces and classifies animals with beautiful graphics) and Kinderama (word and number concepts for preschools) have a great deal of talking incorporated, including spoken instructions and operational prompts with the default Amiga voice. Math Wizard (for 1 or 2 players aged 5 to 13) speaks instructions in addition to telling you correct answers out loud, while Read & Rhyme (space creatures enhance reading comprehension, rhyming and alphabetizing for 1 or 2 players aged 5 to 10) only gives audible prompts because it is intended to build reading skills.



Kidtalk.

TALKING AMUSEMENTS

Lots of games use the Amiga's speech synthesizer in one way or another, but two of them incorporate speech as an integral part. MindScape's Racter lets you sort of interview a talking computer--or maybe it interviews you, I can't decide. At any rate, you become a partner in a dialog with an "artificially insane" talking



Peg game from Conversation With a Computer.

computer and there's no telling where the conversation will lead or what will get thrown in and compared to what. Although his sentences are properly structured, Racter is very obscure. Maybe someone with a better imagination would get a kick out of it. I just get bored.

I much prefer **Conversation With A Computer** from Jenday. It's written in Amiga BASIC and although it talks to you, it's not really conversational, but rather four math and memory games with variable levels of difficulty (suitable for adults and older kids) and some colorful BASIC graphics. Conversation requires 512K and the new release includes an introduction to programming in C. A great buy for the money.

HEAR! HEAR!

Is speech synthesis practical? I think so, as long as you don't expect perfect pronunciation. Although I have no formal background in the subject, EarType is the only program I could find that I believe would be manageable by a sight-impaired or blind user. A problem with communications software that reads text as it comes and goes online could be connect-time charges, since speech dramatically extends access time. Pronunciation is the major problem with language tutors and some other educational applications. Remember, however, that what looks like a problem at first glance can sometimes be used constructively. My kids (who are 5 and 7 years old) get a kick out of the Amiga's speech blunders. When I use a program with them, its mispronunciations not only give us an opportunity to discuss irregular spellings but to talk about their own pronunciation quirks without putting them on the spot.

I'd say audible feedback for learning or improving typing skills and for proofreading

data is the most practical use of speech synthesis. Next come talking games and educational software since speech has a way of making computers seem friendlier. Using a talking program makes you feel like there's somebody there playing a game with you or helping get your work done, and can transform a solitary chore into an interactive situation that is more enjoyable. And sometimes it can be even better than the real thing; unlike your boss or mother, you can always turn the computer off.

- | | |
|---------------------------------------|------------------------------------|
| A-Talk (\$49) | First Shapes (\$49.95) |
| A-Talk Plus (\$99) | KidTalk (\$49.95) |
| Felsina Software | MathTalk (\$49.95) |
| 3175 S. Hoover Street, #275 | Speller Bee (\$49.95) |
| Los Angeles, CA 90007 | First Byte |
| 213/747-8498 | 2845 Temple Avenue |
| | Long Beach, CA 90806 |
| | 213/595-7006 |
| Animal Kingdom (\$49.95) | Gizmoz (\$69.95) |
| Kinderama (\$49.95) | Digital Creations |
| Math Wizard (\$49.95) | 1333 Howe Avenue, Suite 208 |
| Read & Rhyme (\$49.95) | Sacramento, CA 95825 |
| Unicorn Software | 916/344-4825 |
| 2950 E. Flamingo Rd., #B | |
| Las Vegas, NV 89121 | InfoMinder (\$89.95) |
| 702/737-8862 | Byte by Byte |
| Conversation With | Arboretum Plaza II |
| A Computer (\$29.50) | 9442 Capital of Texas Hwy N. |
| Jenday Software | Suite 150 |
| P.O. Box 4313-N | Austin, TX 78759 |
| Garden Grove, CA 92642 | 512/343-4357 |
| 714/636-3378 | |
| Dutch Tutor (all \$29.95 each) | MaxiPlan Plus V1.6B (\$199) |
| French Tutor | Oxxi, Inc. |
| German Tutor | 1835-A Dawns Way |
| Italian Tutor | Fullerton, CA 92631 |
| Portuguese Tutor | 714/999-6710 |
| Spanish Tutor | Racter (\$44.95) |
| Russian Tutor | MindScope |
| Artworx Software | 3444 Dundee Road |
| 150 N. Main Street | Northbrook, IL 60062 |
| Fairport, NY 14450 | 312/480-7667 |
| 716/385-6120 | SayIt (\$14.95) |
| EarType (\$4/freeware) | T & L Products |
| JumpDisk Magazine | 2645 Wilson St. |
| 1493 Mt. View Ave. | Carlsbad, CA 92008 |
| Chico, CA 95926 | 619/729-4020 |
| 916/343-7658 | Talker (\$49.95) |
| KwikSpeak (Price) | Finally Software Inc. |
| Eclipse Data Management | 4000 MacArthur Blvd. |
| 312-1/2 Lafayette Street | Suite 3000 |
| Glendale, CA 91205 | Newport Beach, CA 92663 |
| 818/840-8757 | 714/854-4434 |



BIG BLUE READER CP/M

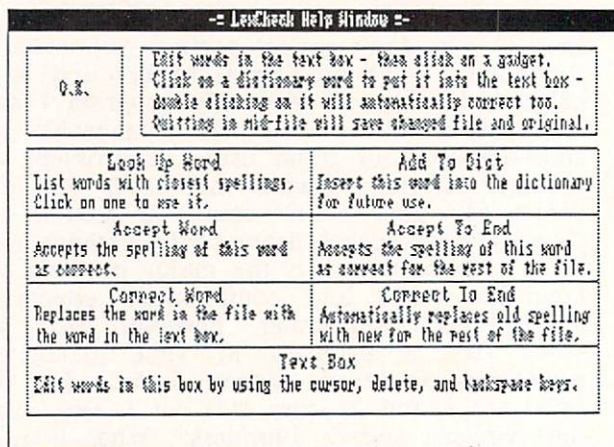
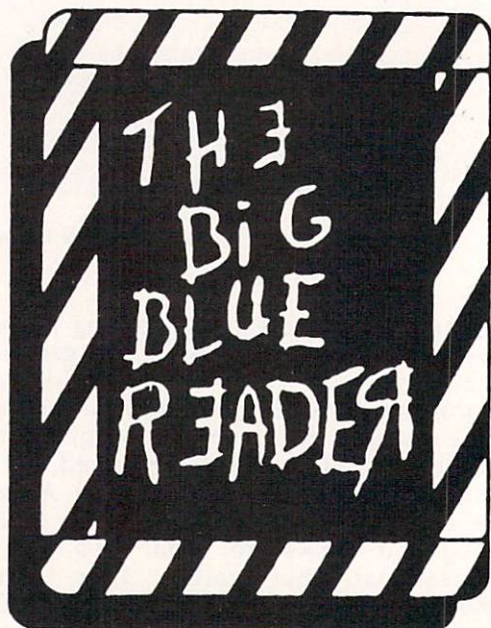
I like SOGWAP's Big Blue Reader, but I like Big Blue Reader CP/M even better. About the only objection I had to the original BBR was that it would only allow you to copy one file at a time, and not allow multiple copies of the same file without rereading the source file. These limitations are overcome in the BBR CP/M version. In addition, this version will use a 1700/1750 RAM expander as a buffer to let you copy extremely long files or even a full disk in a single pass. (We recently used BBR CP/M to transfer all of Midnite's subscribers from their MS-DOS database to Superbase on our C128s.) BBR CP/M translates and copies files directly among 1571 format, MS-DOS, C128 CP/M, and 1541 format diskettes. It won't directly read non-native CP/M disk formats. Before translating Epson, Kaypro, or Osborne files you will have to use C128 CP/M's PIP command to produce a C128 CP/M format disk. This is a bothersome extra step, but at least file transfers are now possible among a multitude of formats. By using C128 CP/M and Big Blue Reader CP/M together, a C128 and 1571 can transfer and translate disk files among all these formats: 1541, 1571, C-64 CP/M, C128 CP/M, MS-DOS (8- and 9-sector, single- and double-sided), Epson QX-10 CP/M, Kaypro IV (single- and double-sided), Kaypro II, and Osborne double-density. BBR CP/M would seem to make a C128 and 1571 into a near-indispensible file transfer station of invaluable use in a school or business environment where multiple computers are used. Big Blue Reader CP/M is \$44.95, or \$15 plus your old disk if you are upgrading from Big Blue Reader, from: SOGWAP Software, 611 Boccacio Ave., Venice CA 90291, 213-822-1138.

PROMISE

Promise is a memory-resident spelling checker for the Amiga with a 95,000-word dictionary. It is claimed that it can check over 1000 words/minute and will work with almost any Amiga word processor since it is stand-alone and multitasking. It will also let you create custom dictionaries and will even check for some punctuation errors. For a 512K Amiga, \$49.95 from: The Other Guys, 55 North Main, Suite 301D, Logan UT 84321 (800)-942-9402

LEXCHECK

If you need 5,000 more words in your main dictionary, LexCheck for the Amiga has a 100,000 word resident dictionary, word lookup, and user-defined dictionaries. The folks at CDA say it will check the average two-page document in one minute. It's multitasking, works with most any Amiga word or text processor, and takes up only 100K of RAM. \$42.95 from: CDA, PO Box 1052, Yreka CA 96097, 916-842-3431



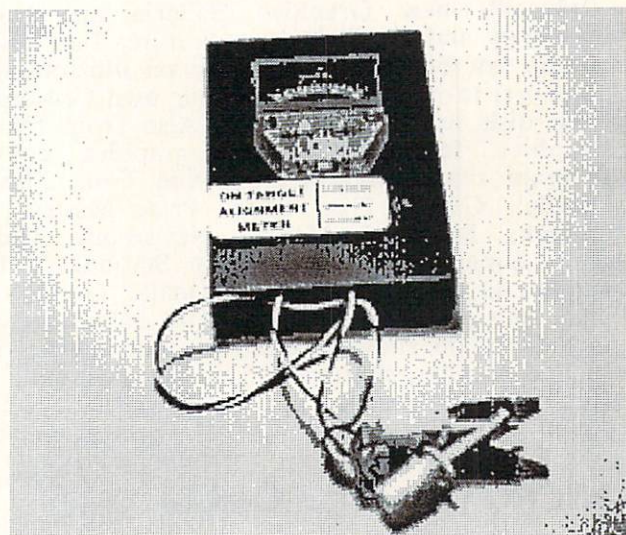
Help window from LexCheck.

STARDOS ARRIVES!

The legal hassles are past; **STARDOS** is shipping! Starpoint Software announced Stardos almost two years ago, but a legal battle involving a member of the StarDOS technical team and a former employer kept this project floating in the Sky until now. If you are among the many who have been waiting for its release, StarPoint has asked us to pass along their sincere thanks for your extreme patience.

Our StarDOS arrived in a can, vacuum-packed like dry roasted peanuts. It is almost worth buying just for the package. You could use it like you would the old snake-in-the-can bit. Ask your guests, "Nuts?", then hand them the StarDOS can. When they pop open the can and pull out the Stardos circuit board, say "Gee, what a neat prize!" A million laughs! Really, though, reading the can label is one of the more entertaining things I've done in the last couple of months.

What Stardos is and what it does are more practical than its can. It speeds up *all* disk accesses, expands upon the C64's screen editing commands, adds a machine code and drive memory monitor, provides a quick unprotected disk backup utility and file copier, and gives you a simple text editor with binary file editing capability, all in one package. There are two hardware elements to Stardos: a cartridge for your C64 and a board to install inside your 1541 (a relatively simple process, but still not a task for the faint of heart). The whole thing looks pretty interesting. We'll take a close look at it in a later issue. Stardos is \$64.95 from the guys at: StarPoint Software, 6013 Macks Gulch Rd., Gazelle CA 96034, 916-435-2371.



On-Target drive alignment meter.

THE SOFT GROUP

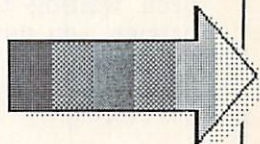
The Soft Group is offering two interesting-looking new utility packages for the C64. **Explode!** does not make your computer blow up, but is a multiple-utility cartridge that adds hires screen dump/save, fast disk load/save, and other DOS wedge functions for \$29.95. **On-Target** is a drive alignment utility disk with a meter for measuring the signal from the read head. It's unique, and it's \$25.00 for the 1541 version, \$35.00 for a 1541/1571 version. From: The Soft Group PO Box 111, Montgomery IL 60538, 312-851-6667.

MYSTIC JIM GEOSWARE

Mystic Jim Software offers three disks filled on both sides with GEOS-related programs. These shareware disks include new input drivers, desk accessories, an Icon Maker, Alex Boyce's Tech-Manual-on-disk, a Print Shop graphics converter, additional fonts, and new printer drivers. Disk #4 is in the works. Contact: Mystic Jim, 2388 Grape, Denver CO 80207. He also offers a 'membership' program which gives you a newsletter, BBS support, and fast disk service for \$25.

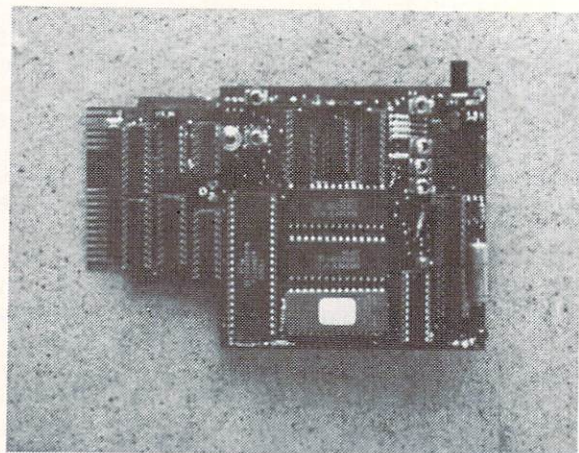


mystic jim



TURBO 64

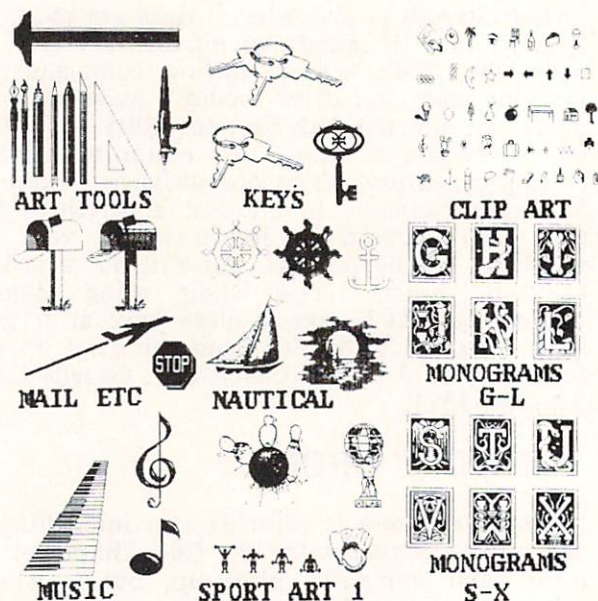
If you're into intensive hardware hacking, then Turbo 64 should interest you. This add-on board for the C64's expansion port features a 65C816 CPU chip, the same as the one used in the new Apple IIGS. This 8/16-bit chip runs at a clock speed of from 100 KHz to 4 MHz, four times faster than the C64! The clock speed is variable via a manual control on the board. The board also includes 64K of battery-backed RAM. SwissComp claims the board will run a good number of off-the-shelf C64 programs. We remain skeptical until we see an operational unit, but the device still sounds like a hacker's dream. \$189 from: SwissComp, 5312 56th Street Commerce Park, Tampa FL 33610, 800-237-0906. SwissComp also produces speedup boards for the 1541 and 1571.



Turbo 64 65C816 board for the C64.

INKWELL GRAPHICS

Inkwell's new Graphics Galleria art disks for Flexidraw and Doodle! artists features four disks full of clip art, borders, maps, seasonal illustrations, and potpourri to incorporate into your own C64 creations. Each disk retails for \$24.95. Also from Inkwell is Graphics Integrator II, a graphics conversion program that will convert a file from Flexidraw, Doodle!, GEOS, Print Shop, Print Master, Koala, Cadpak, Billboard Maker, Newsroom, Computer Eyes, Super Sketch, Animation Station, or Blazing Paddles to any of the other formats. G.I.II will also print any picture in b&w or full color, and it also includes slide show capabilities with special effects such as sparkle, shutter, and door transitions. \$29.95 from: Inkwell Systems, Box 85152 MB 290, San Diego CA 92138, 619-268-8792.



Graphics Galleria clip art from Inkwell.

MICRO MEMORY CART

We have word of another nonvolatile memory cartridge for the C64 that will allow you to save BASIC or m/l programs between sessions, thanks to the miracle of battery backed-up RAM. No word on the capacity of the cartridge, but the price is \$24.95 and includes an auto-startup capability. Contact: Scinort Micro, PO Box 17546, Austin TX 78760

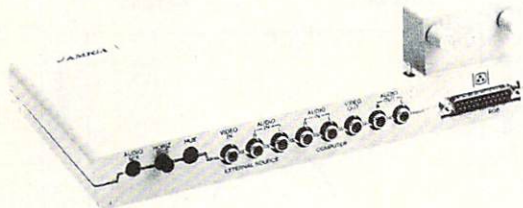
INEXPENSIVE LASER PRINTERS

Though they aren't cheap enough to make it into every home yet, the price of laser printers is dropping. Okidata recently announced a \$200 price reduction for its least-expensive laser printer, the Laserline 6. This printer, which features 6 page-per-minute throughput, HP Laserjet Plus emulation, and additional memory and interface options. If you've been waiting for laser printers to break the \$2000 barrier, you might want to check this one out. From: Okidata, 532 Fellowship Rd., Mount Laurel NJ 08054, 609-235-2600.



Under \$2000 Laser 6 printer from Okidata.

...from page 27



GENLOCK BUGS

We have heard about two bugs in the hardware of Commodore's Genlock that may cause a few problems. The first is a tendency of the screen to 'hiccup' if there is no video input to the Genlock. The only solution is to unplug the unit (not easily done) or always keep a video source supplied to it, even when it's not being used. The second problem involves a weak and somewhat garbled sync/color burst signal. While the results with home equipment are fine, sensitive professional video equipment doesn't like the signal much. An additional video 'conditioner' will apparently take care of the problem.

On the other hand, we've heard that the Genlock will decode scrambled pay-TV channels...

TECH NOTES

Recent advances in computer technology include:

-> A plastic credit card sized one-megabyte RAM card with lithium battery backup. Compact, transportable, nonvolatile RAMdisks, anyone?

-> A 5.25" floppy disk drive with SCSI controller and 10-megabyte capacity for under \$1000. Access speed is comparable to that of a low-end Winchester hard disk drive.

-> Non-cryogenic digital circuitry has been successfully run at 18 gigahertz (18,000 MHZ). That's 18,000 times faster than a C64.

-> There are new LCD technologies that make possible flexible, high-contrast LCD displays of up to a million pixels.

-> Developments in superconductivity are happening on a daily basis. The operating temperature of superconductors, which will make possible superfast, superefficient computers, have been pushed up to that of inexpensive liquid nitrogen. Most researchers say that a room-temperature superconductor is very close.

QUOTE OF THE MONTH

We found two quotes this time that were both so great that we just couldn't decide which one to print. So here are both of them:

From *The Washington Post*: ...Commodore CEO Tom Rattigan dismisses Atari as "a pimple on the [rump] of the industry."

From *Computer and Software News*: "...We have been told by more than one ex-employee that there are two things in life that one should never do: 1. Compete with Jack Tramiel. 2. Work for Jack Tramiel."

THREE STOOGES

Master Designer Software, the folks who gave us the Cinemaware series, are working on a new game based on our favorite slapstick saps, the **Three Stooges**! Early rumors say the game may even include the digitized voices of the Stooges. Coming this Fall for the C64.

Also in the works there: C64 **Defender of the Crown**, which MD says actually features enhanced gameplay over the Amiga version! It should be shipping as you read this. **King of Chicago** will be coming in June for the Amiga. They also have a top-secret C64 enhancement cartridge project underway.

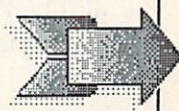
MICROILLUSIONS PROJECTS

The folks at MicroIllusions have got about seventy new products slated for development over the next year. Among the most exciting are a desktop publishing package for the Amiga, a professional Amiga MIDI music program called **Music X**, a planetarium program for Amy, four new C64 game titles for only \$24.95 each, and a full-featured inexpensive word processor for the Amiga called **Dynamic Word**. We'll know more next issue.

COPYRIGHT NOTICE

We thought you'd like to see the copyright notice Bryce Nesbitt put on his **PopToFront** utility program for the Amiga. (Originally published in *The Transactor*, July/Aug 1987):

PopToFront (C) 1987 Bryce Nesbitt. Unlimited free non-exclusive license hereby granted to any sentient being to use or abuse this code in any way whatsoever provided that this and any other copyright notices remain fully attached and are reproduced in any simultaneously distributed



printed matter and with the exception that, without prior written permission, it not be utilized by any entity that has been commonly referred to as Robert W. Skylès, Skylès Electric Works, Jim Drew, Reggie Warren or any organization founded by, controlled, employing or profiting any such entity, its offspring, or spouses.

SHORT BITS:

-> There's a new buzzword you need to know: **terabyte**. That's one trillion (1,000,000,000,000) bytes of memory. Believe it or not, they are talking mass storage capacities of that size in the next generation of computers. And I was just getting used to 'gigabytes'!

-> The Japanese tariff (if it lasts long at all) will not have much impact on Commodore. They make their own chips, assemble computers in Hong Kong, not Japan, and have the capacity to move all operations to the U.S. if necessary.

-> Despite Apple's assurances that the Apple IIGS shortage would last only until Christmas, dealers are apparently still having trouble getting units from Cupertino.

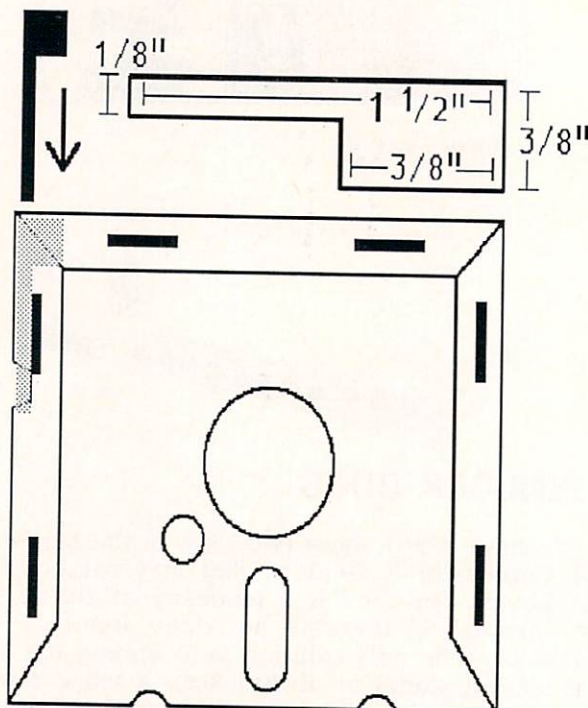
-> **Design Graphics World** magazine ran an article titled "Get the Most for Your Money in a Computer Art System". Though the Amiga wasn't named specifically, there was an uncaptioned picture of it printed with the article and the "Buyer's Checklist" sidebar sounded like an Amiga sales brochure!

-> Apple/Sweden has gotten the okay from the U.S. government to sell Macintosh computers to the Soviet government for use in their auto industry. It's the first time that 16/32-bit computers have been officially allowed into the U.S.S.R.

-> We are hearing reports back from Commodore users groups that Commodore is actually sending them lists of new Commodore computer owners in their area who have sent in warranty cards. That sounds to us like Commodore is getting re-involved in actual user support! Bravo, Commodore.

-> The 12-year battery in the new Macintosh II is apparently giving up the ghost in most cases after just a couple of months. The real bad news is that Apple reportedly has enough of them already installed in chassis that they will be shipping them that way for much of the year.

-> If you own a Star SG-10C or SL-10C printer, you can get a free upgrade of the ROMs that will allow you software access to many features that required DIP switch settings previously. Write and request them from: Star Mirronics, #3 Oldfield, Irvine CA 92714.



WRITE PROTECT TABS

We've been waiting for someone to come up with a convenient, neat, and easy-to-use substitute for sticky 5.25" disk write-protect tabs for *years*. This nifty design seems to be the answer. It's a little plastic tab that slides down the edge of your disk seam which can be slid back and forth to cover or uncover the write protect slot. You can cut your own out of plastic sign material like the *House For Sale* and *Danger* signs sold in department and bookstores. Just cut to the dimensions in the illustration with an X-acto knife and snap. Trim until you can easily slip the tab into the side seam on your disk; it works with about 95% of the disk brands on the market. Pull the tab back and you can write to the disk (and the tab even sticks out of the drive to warn you!) Slide it in and the disk is protected. This little device gets our Nobel Peace Prize nomination this month!

HP OFFERS POSTSCRIPT

Hewlett-Packard has changed its mind about the PostScript page description language. H-P announced last month that they will make and market a PostScript add-in board for their LaserJet line of laser printers.

IBM showed considerable sense by endorsing PostScript in March, and with the addition of Hewlett-Packard's support PostScript has finally become the uncontested standard of the desktop publishing industry.



WARNING: The following items are the best RUMORS that we've heard recently, and as such they should not be taken seriously. Like all rumors, many of them will turn out to be false or inaccurate. They are presented for your entertainment and amusement only!

- > We hear that SOGWAP is working on a version of **Big Blue Reader** for the C64 with a 1571. The name? **Little Blue Reader**, of course.
- > Lots of people still wonder whatever happened to the **Enable** software for the Amiga. We hear that The Software Group delivered **Write** to Commodore long ago and it was rejected. It seems nobody ever got around to telling the public...
- > We now hear that the price on the A2000 has been raised to \$1795. It's still a good deal, but there's going to be a lot of grumbling about that one.
- > We hear that the author of **Paperclip Elite** for the Amiga acquired the rights to that title when EA acquired **Batteries Included**, and will be selling it under another title through another Canadian firm.
- > We also hear that EA decided not to pick up **Paperclip Elite** because the program is so huge that early versions leave less than 10K of text area on a 512K Amiga...
- > Parker Brothers may sue the authors of public domain **Monopoly** games...
- > Microware is developing the **OS-9** operating system for the Amiga, but are putting it on the back burner until the Atari ST version is done.
- > Here are the latest (and variable) specs on the A3000, now under development in West Germany: 68020 cpu, advanced video capability (including a 640x400 rock solid display), and a full meg of chip RAM. Don't look for the machine for at least another year.
- > We hear there may be an upgrade allowance of some kind in the works for A1000 owners who want to upgrade to an A2000. Stay tuned.
- > Commodore is apparently marketing a **parallel disk drive** for the Plus/4 and C16 in Europe. It plugs into the cartridge port and

includes an IEEE interface. How come it's not in the U.S., but for the C64?

-> We hear the New Mexico Commodore Users Group is working on an **internal RAM expansion** for the 1571 that would give it RAMdisk capabilities. They're shooting for a price of \$300, 1571 included!

-> The same users group is looking into adding an 8088 with MS/DOS capabilities to a C128/1571 system.

-> We hear a third-party company has a combination **frame-grabber/digitizer** under development for the A2000's video slot. Price: \$400.

-> We hear a small company on the West Coast is working on both 68000 and 8088 plug-in expansion cards for the C64.

-> It looks probable that Commodore will announce their own 20- and 40-meg internal hard drives for the A2000.

-> We have heard that Commodore's new management may cut out distributors and sell direct to dealers. This would inject activity into Commodore sales by passing a higher profit margin along to the end dealer.

There are *hundreds* of rumors floating around right now, but that's our pick of the best for this time!

THINGS WE'D LIKE TO SEE

-> How about an A2000-style replacement keyboard for the A1000?

-> While we're at it, how about an integrated musician's keyboard for all the professional MIDI musicians out there? You'd want a regular keyboard and a synthesizer keyboard all in one unit.

-> How about some *true* multitasking software for the Amiga? Like software that recalcs a spreadsheet while generating a graph, saving a file, and taking new input all at once? Or integrated simultaneous telecommunications? Or applications that would run a non-time-stealing second application in the background that only uses cpu time while the main program is waiting for keystrokes?

-> There is a pressing need for effective user interfaces for the physically disabled. For example, there is a **PD Lens** program for the Amiga that is just great for on-screen magnification of *any* Amiga screen for the visually impaired. A utility that could automatically parse and speak any screen and menu text, and even read highlighted menu selections, would be invaluable for the totally blind. And how about quick and simple text input using the mouse? It would be a real boon for the physically handicapped. There's not a lot of money in these things, but they are worthwhile projects.



SURVIVAL ★ GUIDE ★

CONTINUED ...from page 36

make one by cutting a piece of plywood or shelving to size and placing it on top of four pop cans. It's not pretty, but it works.

Next, read the manuals. They really do tell you how to hook everything up, and Commodore has even included some excellent hookup diagrams lately. While you are plugging things in, try not to touch any of the computer's exposed connectors. Touch a lamp or pipe occasionally to discharge any static electricity you may have built up. It is possible to harm a computer with a good spark of static to an exposed pin, so exercise some degree of caution. Hook up the computer first, then the disk drive, the printer (if any), and the monitor last. Try to run all the cables and wires neatly, and keep the power cords away from all the other cables. Put the disk drive in a convenient spot at least a foot away from your monitor. The monitor puts out a strong magnetic field, and if the drive is too close it can affect the drive's reliability.

Once you have everything hooked up to your satisfaction, turn it on. There has been a lot of hoopla about what order to turn things on in, but it rarely seems to matter. We leave everything switched on and turn on the whole system at once with the switch on the power strip. If you really want the 'official' sequence, here it is: monitor first, then disk drive, printer, and computer last.

What if it doesn't work?

Always check the obvious first. Is the power switch on? Is it plugged in? Did a plug wiggle loose somewhere? If there is a switch on the monitor to select video inputs, is it set correctly? Most of the time, the problem will be something obvious.

If you still have problems, check everything against the manuals again. If you have a friend who can help you, we hope he has been there to help you through the whole process. Odds are he can help you out. If you still have no luck, call the dealer you bought it from.

Remember, the more equipment you have hooked up, the more ways there are for things to go wrong. Turn everything off and disconnect all but the computer and monitor. Check the connections and turn them on. If they work, try adding the drive, then the printer to the system. You can sometimes find a problem this way.

If nothing works yet, you may have a bad computer. If you bought it locally, take it back and ask them to check it. If you bought by mail, you may be in for a delay while you ship the unit back. Call for an authorization first. In any event, don't ship or take anything back until

An organization that combines people and computers in a constructive way is your local Commodore users group. We strongly suggest you join yours. You'll meet wonderful people who share a common interest in computing, and you'll have a great brain pool from which to draw answers for your many questions. Check out the community calendar in your local paper, or the lists of users groups published in national magazines for information about one near you.

you are sure you have exhausted all of your own resources. Don't Panic!

Once your computer is up and running, you should test it. The best way to do this is to load and run some software that uses all the functions of the computer. (You'll need to read the manual for your computer to find out how to load and run software.) A good game will test the graphics, sound, and joystick. If the software loads okay, the drive is probably alright, too. The printer is trickier, but it should have a self-test mode explained in its manual. Try to test it under computer control if you can. Just make sure you test everything out. We know of lots of people who had their warranties expire before they found out their sound didn't work, or their printer wouldn't print graphics.

Next, *burn it in*. This just means to load up a game and let it run for a couple of days. Your computer should be able to run continuously. (You *do* have adequate ventilation around all the components so they don't overheat, don't you?) If it doesn't last through a burn-in of 48 hours or so, take it back and ask for an exchange.

But won't I become a nerd?

Maybe. But nerds are people, too. There are worse things to be, like a politician or the CEO of some huge impersonal corporation.

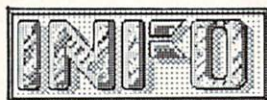
After you've had your computer for awhile, you'll probably start tossing computer terms into your daily conversation. You'll start saying things like "Sheila, it's time to power down the stereo," and "How do I interface this pencil to this pencil sharpener?"

You may find yourself eating only junk food and living in front of the monitor. At this point you will have to establish some order in your life to maintain your humanity. At least once a week, take a look outside. Open a window and breathe in some real air. Get up from your monitor and walk around the house. See who lives in the house with you. Ask them if they are related to you, and if so, how? In other words, don't forget family, friends, and the outside world. Take time out for the things that are really important. Computing is great, but it is only a part of real life.

Have fun with your new computer!



Welcome to



THE INFO STORY, (Part 1)

by Benn Dunnington, Publisher

Here, for the first time in print is the complete history of INFO Magazine. It is a story about what any slightly fanatic consumer can do with a cheap, powerful, personal computer, a patient and understanding family, and enough naivete to not know any better!

It all started back in the Spring of 1983. I had been working for nearly 7 years as an R&D technician at the Weyerhaeuser Co. Technology Center in Federal Way, Washington. This was the longest job I had ever held, and easily the most enjoyable and rewarding job I had had, or could even imagine. My position was essentially that of an in-house inventor: working with scientists, other engineers, and wood-products plant personel, I was called in with my supervisor/partner to design, build, and install a wide range of incredible gadgets, devices, and machines ranging from room-sized paper-handling structures to intricate laser-lenses which we had to machine under a microscope! Every day was challenging and full of excitement: I thought I was content.

Then I read a magazine article about a soon-to-be-introduced personal computer called the Commodore 64. By the time I was done reading, I knew I had to have one. Like many of you who went thru this process, I didn't know exactly why I had to have one, but I was in love, and there was no talking me out of it. I faced two immediate obstacles: 1) it would be months before the first 64s would show up in stores, and 2) where was I going to get \$595 to pay for one?

By August the Seattle area had received its first shipments of 64s, and I had a plan. I convinced a Seattle computer dealer to sell me 5 C64s for the price of 4: if I sold all 4 (you see, one was for me), I could come back for 5 more, and we would have an ongoing arrangement. As I drove home with my trunk full of 64's, I could hardly keep my mind on the road- I remember even appealing to the heavens to protect me and my cargo at least long enough to get home and try out my new and long-awaited technological marvel.

All I really wanted was one C64 and some time to play with the darn thing- this was not to be: the other four computers sold so fast, then the next five, then 10... Well, before long, I was taking days off work, on the phone to TOTL and Cardco and HES, buying 5 GRIDRUNNER here, and a case of TOTL.TEXT there, staging lengthy

CYBORG GAZETTE

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CYBERTECH

AUBURN WA 98002 206 939-0582

FOR THE COMMODORE 64™

SPECIAL ISSUE
64 PRODUCT GUIDE

Cyborg Gazette wishes to thank those who have waited patiently for this issue. Our only excuse is that we were overwhelmed with the flood of new products for the 64 since Christmas and hope you will enjoy the rest.

We also hope to put to rest for good the phrase, "but we hear it doesn't have such software available..." It looks like Music and Business are going to be prime activators for buyers of the 64 as we see some very excellent development in both these areas.

Commodore's newly announced music products along with the already superior built-in sound features of the 64 leave it unchallenged as the most affordable and sophisticated programmable music synthesizer ever developed for the personal computer market.

Business software is expanding strongly, and many 64's are also being sold on the strength of products like Wordpro 3 Plus which, in conjunction with the newly priced Spellmaster, constitute the best word-processing value available anywhere, period. Both of these products now retail for \$9.95 and have historically sold quite briskly for the C64 business machines at \$200.00 and \$200.00 respectively. So, the prospective computer owner looking for this level of software is saving almost enough in software costs to treat these two selections alone to buy a disk drive!

Another eye-opener is CalcResult, a 3-D spreadsheet with powerful features and built-in plotting routines at a fraction of what similar packages are selling for on other personal computers.

While much has been made of the eventual implementation of CP/M on the 64, we must not forget the strength of the powerful, low-cost, dedicated software continues. There will be little demand for the premium-priced CP/M selections.

*** about CYBERTECH ***

CYBERTECH publishes the CYBORG GAZETTE primarily as a service to its customers past and future. We are an independent service and retailer and are not affiliated in any way with Commodore Business Machines or any other vendors represented in this publication.

It is our intent to sell only the products from each vendor (including Commodore) which we feel are worthwhile and constitute at least a reasonable value for our clients.

When you buy major components from CYBERTECH, you are also paying for support and service. You may call our number at any time, and expect a prompt and informed response to your questions.

If you have bought your products elsewhere, please do not expect to be extended this service.

Also, please understand the difference between support and over-the-phone programming lessons. We do not offer the latter.

While CYBERTECH is not a mail-order house, we do serve all locations we can ship to including Canada.

In general, we handle or can get most items listed in this newsletter. Certain hard to get items may require a deposit to establish client priority. We are acquiring new products and vendors all the time.

\$100

ISSUE 3

C49

*** RATINGS & CODES ***

Throughout the product listing you will find this general format:

NAME (MODEL/COMPANY)	PRICE	AVAIL.	RIS.
The media codes where applicable are:			
(T) Tape			
(D) Disk			
(TD) both tape and disk versions included on tape			
(DT) disk or tape; two prices			
(C) Cartridge			
(CD) cartridge uses disk files			

N.A. means a specification is not available usually because we have not tried this product yet.

STARS (1-5) are an attempt to rate products. This is always difficult and we have tried to be as objective as possible. We rate only products we have seen, used, or had evaluated by respected associates. The rating scheme is an attempted analog to the very useful "price per sound" in most supermarkets today. The limitations of this analogy notwithstanding, OUT OF 2 SIMILAR PRODUCTS WITH THE SAME # OF STARS, THE HIGHER PRICED ONE IS A BETTER PRODUCT in our estimation. If a product is only N.A., it doesn't have to do much to rate high. E. the same token, a \$400.00 software package can be nothing short of incredible to rate 100000. We are influenced by ease of use, crash-resistance, creativity, flexibility, appropriate use of sound and graphics, documentation, and of course, cost.

SX-100

THE LAST ISSUE OF THE CYBORG GAZETTE

demonstrations for my co-workers in company conference rooms after hours, and setting up package systems for friends and neighbors. I was hooked bad- scouring scores of magazines for the slightest mention of the 64 and its products. Using the buy 5, sell 4 technique, I was rapidly acquiring one of everything made for the 64. I was becoming an expert consumer.

I had no store, but my friends had my phone number, and my fellow Weyerhaeuser employees knew where my lab was: everybody had questions, and I had pledged to answer them all as part of the incentive to buy their gear from me. The questions were multiplying, and I wasn't getting much work done for the company.

I started to Xerox a few pages of the most common questions and answers, along with a few news items and a list of currently known products, prices, and my recommendations. I titled this corner-stapled, hand-written brief the "Cyborg Gazette, an irregular newsletter of obvious bias, primarily but not exclusively devoted to the amazing Commodore 64", and passed it out to my former and prospective customers. I thought this would ease the problem of keeping my clients informed without losing my day job in the process (my nights were already full with typing-in and converting BASIC programs listed in magazines for other computers).

continued

The first *Cyborg Gazette* only held back the information-hungry 64 addicts for a few days, and before I new it, I was working on *Gazette* #2. There were already more questions, more clients, more products to check out, and an increasing number of articles to condense from a growing variety of magazines (many of which are no longer around). By this time I had figured how to get a company-loaned Texas Instruments Silent 700 portable terminal with thermal hardcopy to act as a printer for my 64!- using the TI and TOTL.TEXT (a now-extinct wordprocessor), I put together a whopping 12 pages of expanded reviews, news, and even my first "Turkey Alert" (Microspec's bug-ridden *Data Manager System*). These scant 12 pages took me a month of evenings and weekends to finish, and the circulation was up to about 50!

About this time, another area dealer encouraged me to clean up the pages a little and put a \$1 price on the cover, saying that he would take 100 copies of the next issue on consignment at 50 cents each to sell at a local Commodore "fair" he was exhibiting at. I took his suggestion and prepared my best issue yet- still 12 pages, but printed in small type on my brand-new Gemini printer (bought 5, sold 4). Weyerhaeuser drew the line when I asked permission to print 500 copies on their Xerox machine- they [politely] suggested an offset printer. I thus discovered offset printing which was even cheaper than Xeroxing, much cleaner, and even allowed high-quality photo reproduction and different colors of ink (I printed a couple hundred extra *Gazette* #3s in Sepia)! I sold all but a handful of #3, and immediately had inquiries and orders for more!

A little light bulb lit up in my head and I saw it all: wouldn't every new Commodore owner in the country like a compilation of every product known and anticipated for their machine, with short descriptions and even a star-rating to help them avoid the duds and not overlook the gems? Wouldn't they rather hear it from a fellow fanatic instead of some professional publishing mogul just cashing in on the "Computer Craze"? Shouldn't it be possible to use these new word processors, spreadsheets, database managers, and drawing programs to create an entire magazine- art, text, and all- right there in my bedroom? (the term "desktop publishing" was still 2 1/2 years in the future) And if hundreds of dealers could each sell 100 copies 4 times a year and I could clear .25 on each copy, wouldn't that make a nice supplement to my regular income?

So what if I didn't know the first thing about publishing a magazine- I'd keep it informal, I'd learn, and I'd make sure folks got their money's worth. My two bewildered daughters agreed to



INFO-64 ISSUE #1

share a bedroom so that I could use their other bedroom as an office. I mocked-up a 3-color cover and a few inside pages of my proposed magazine (to be called INFO-64) and mailed it to all the Commodore dealers conveniently listed in each issue of *Commander Magazine* (now defunct). I sent for every other magazine's media kit- and copied them. I sent for their advertiser contracts- and copied them. I called advertisers and asked them how this advertising deal usually worked, and they explained everything patiently to me. My printer unselfishly informed me that a "web" press could print my "book" (as printers like to call them) even cheaper and better than he could. Orders started trickling in, I had a second phone put in. I lined up a few brave advertisers, and I realized that this wasn't going to get done on weekends and evenings. I quit my day job, my wife and children wept, I tried to cheer them up with pep talks about pioneer spirit, adventure, and untold riches; they wept some more. I tested software, I wrote, and experimented with my printer, I learned how to shoot screen shots with my cheap Pentax K1000, I designed border boards, I contacted hundreds of vendors and tried to convince them to send me their products for review. I didn't know a "Ruby" from a waxer (a handy gadget for easily affixing art and text material to layout boards), in fact, because I didn't learn about hand-waxers until after issue #2, my arms and hands were constantly covered in a fine sticky mist of various types of spray adhesive- I looked like a bumblebee after a long day of pollen collecting!

Three months later I was nearly ready to go to press with my first issue of INFO-64. It had a full-color cover and back-cover ad, was 48 pages long, had 17 paying advertisers, 12 game reviews, 3 in-depth reviews, a news and views section, a hardware project, and a reference guide to over 700 products for the C64. I was also out of money.



to be continued

WIN an AMIGA 500 !!



**IT'S
FUN!**

**IT'S
EASY!!**

OFFICIAL RULES (No Purchase Necessary):

1. All persons subscribing to INFO between June 1, 1987 and August 1, 1987 will automatically be entered in the AMIGA SWEEPSTAKES. You may also enter by hand-printing your name, address, and zip code on a 3" x 5" piece of paper. You may enter as often as you like, but must mail each entry separately to: AMIGA SWEEPSTAKES, c/o INFO Publications, Inc., PO Box 2300, Iowa City, IA 52244. Entries must be received no later than midnight, August 1, 1987, and the drawing will be held by August 15, 1987. All entries become the property of INFO Publications, which reserves the right to reprint the name and address of the winner.
2. The winner will be selected in a random drawing from all entries received, under the supervision of the publisher of INFO MAGAZINE, whose decision will be final. Only one prize will be awarded in this Sweepstakes. Winner will be notified by mail and may be required to execute an affidavit of eligibility and release. Odds of winning will depend on the number of entries received. INFO MAGAZINE will ship the prize UPS ground or Parcel Post at publisher's discretion. No warranties apply. Prize is not transferable. No substitution for prize. Taxes are the responsibility of the winner.
3. Sweepstakes open to all residents of the U.S., its territories and possessions, except employees (and their families) of INFO MAGAZINE. Void where prohibited or restricted by law.
4. For winner's name, send a stamped, self-addressed envelope to AMIGA SWEEPSTAKES, C/O INFO PUBLICATIONS, PO BOX 2300, IOWA CITY, IA 52244.

the EDITORS' PAGE

(continued from page 8)

Commodore computers, and the PD versions are available free for the copying from local users groups, or for downloading from local BBS systems. They are also available on inexpensive PD disk collections by mail or for downloading for a fee from networks like QuantumLink, CompuServe, and PeopleLink. Not only do these methods save you hours of typing, but they cut out the associated errors.

Most of the programs that *COMPUTE!* and *Gazette* publish are machine language programs printed in hexadecimal listings. Not only are these difficult to type in, you also learn absolutely nothing in the process. You can learn a great deal about your computer from a BASIC or assembly-language listing, but you can't learn anything from a hex listing except the location of the 0-9 and A-F keys.

SPEEDSCRIPT

Speedscript is a nice wordprocessor. For many, it has proven to be the only wordprocessor they need. It's probably the best thing *COMPUTE!* has ever done. But *COMPUTE!* keeps pushing Speedscript to the point of absurdity. Almost every issue of *COMPUTE!* or *COMPUTE!'s Gazette* includes a new version of Speedscript, or an enhancement, or a version for a different computer, or something. (Even *WE* jumped on the bandwagon with a SpeedScript ErgCard in INFO #6!) The May *Gazette* alone had FOUR Speedscript-related type-in programs. If you're not into Speedscript, that's a lot of useless pages. Worse, to maximize Speedscript mileage they have even pulled tricks like printing the most important update of C64 Speedscript in *COMPUTE!* after printing the original program in the *Gazette* (so that subscribers had to run out and buy another magazine, or buy the SpeedScript disk in addition to their *Gazette* subscription): incredible!

SUBSCRIPTION SCAM?

We recently sent in a 1 year subscription for *COMPUTE!'s Gazette*. Instead of starting us with the next issue, we received the last three back-issues in the mail (1/4 of our new subscription used up by issues we already had and didn't request)! When we called to see what was going on, we were told that it was now the "policy" to backdate *Gazette* subscriptions by three issues! Since we complained, we were told

our subscription would be extended by three issues. This little maneuver, while a clever way to improve cash-flow and minimize surplus inventories of issues which presumably sold less briskly than anticipated, seems ethically questionable at best. If you have been stung by the *Gazette's* new policy, we suggest you call their subscription number at 1-800-247-5470 and get your subscription properly adjusted (and while you're at it, it wouldn't hurt to tell them how much you enjoy being hustled that way).

COMPUTE'S FOUNDER

COMPUTE! has used a lot of editorial space recently praising its "Founder", Robert Lock, and frankly, we just felt we had to say something to help clarify what we think are some important historical details.



Cover of the first issue of *COMPUTE*. Fall, 1979.

Robert Lock recently stepped down as Editor-in-Chief of COMPUTE! Publications, and since that time a great deal has been written (in *COMPUTE!*) about how he founded *COMPUTE!* magazine. While it is true that he built *COMPUTE!* into a large, mass-circulation computer magazine (no small feat, and one which we are still working on), there is a part of *COMPUTE!*'s genesis that seems to have been forgotten in the recent telling and retelling of the *COMPUTE!* story.

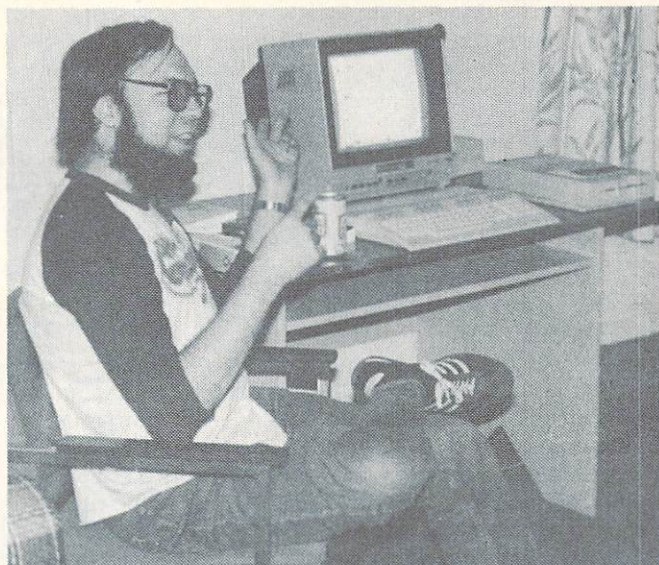
In recent *COMPUTE!* and *COMPUTE!'s Gazette*, editorials, Robert Lock has been repeatedly glorified by his associates who paint a picture of a philanthropic pioneer, immaculately conceiving of, and then single-handedly carving out of the publishing wilderness a unique and original consumer publication: all this for the sole benefit of the computing public.

"Starting in a storefront in Greensboro, with a handful of employees, he began working on the early issues of *COMPUTE!* At that point, he was personally involved with every aspect of his young magazine: He pasted up galleys, called advertisers, contacted authors, and edited copy." So writes Editorial Director, Richard Mansfield, in the May issue of *Gazette*. At the same time in the May *COMPUTE!*, Associate Editor, David Thornburg, in his tribute to *COMPUTE!* and Lock, seems to be trying to convince readers to award the already extremely successful entrepreneur "Hero" status as well: "Names like Jobs, Wozniak, Peddle, and others too numerous to mention, are bandied about as though they were the only people involved with the success of this industry.", finishing with, "...this magazine was built with the leadership of one of the finest men I have met in the industry. Thank you, Robert for all you have done for all of us."

THERE IS ANOTHER STORY...

In the many nepotistic retellings of its own early history, *COMPUTE!* seems to have forgotten its roots. The cover title of the very first *COMPUTE!* (with a period, not an exclamation point) proclaimed the whole truth: *The PET Gazette With A New Name. COMPUTE. The Journal For Progressive Computing.*

In April of 1978, hard on the heels of the introduction of the original PET 2001 personal computer, Len Lindsay published the first single-sheet-folded issue of *The Pet Gazette*. It listed two PET users groups, 4 magazines, 15 PET-related magazine articles, and a list of 4 known



Len Lindsay, Founder of PET GAZETTE, Father of *COMPUTE!*

Cover of the very first issue of PET GAZETTE.



FREE EXCHANGE OF PET COMPUTER INFORMATION

Permission granted to photocopy this newsletter in part or in whole. Reprints are fine if they acknowledge the PET GAZETTE as source.

MAGAZINE ARTICLES ABOUT T.E. PET

We have listed the articles that we are aware of and have in our files. Please tell us if we are missing any.

PET RESOURCES

We have listed the name and address of all PET computer resources that we are aware of now, hardware, software, and other. We have written to all that are listed.

Please inform us about sources we missed and send us your comments about any of these sources that you have dealt with.

FREE PET PROGRAM EXCHANGE -- THE PET CASSETTE EXCHANGE

The most important part of a computer system could very well be the software, the programs. This highlights an overlooked advantage of the PET, ease of software exchange.

Most of the obstacles to software exchange has been overcome by the PET computer. Pet computer users may exchange software without worrying about which media (paper tape, cassette, disc, etc), language (tiny Basic, Company A Basic, Company B Basic, etc), cassette interface (Tarbell, Processor Tech, etc), baud rate (300, 1200, etc) or display format (16 x 64, 25 x 80, etc). These standards are built into the PET.

Communication of what is available and Documentation of it are two areas to concentrate on. Please send us your input on what standards should be set as guides to ease software exchange.

PET GROUPS

PET Users Group, Box 371, Montgomery, PA 18936.

PET Owners Group, Carl Martin, 2001 Bryan Tower, Suite 3800, Dallas, TX 75201, (214) 742-5750.

MAGAZINES AND NEWSLETTERS TO WATCH FOR

PET Gazette, Microcomputer Resource Center, 5150 Anton Dr. Room 212, Madison, WI 53719.

Micro, The Computerist, 8 Fourth Lane, So. Chelmsford, MA 01829.

ON LINE, 24695 Santa Cruz Hwy, Los Gatos, CA 95030.

Peoples Computers, Peoples Computer Company, Box E, Menlo Park, CA 94025.

EDITORS' PAGE

continued

PET products. Len didn't even have his PET yet. He mailed *The Pet Gazette* out free to everyone he could think of who might be interested in PET information.

The second issue was twice as large. By issue 3 *The Pet Gazette* was 24 pages long, and Len's PET had finally been delivered. He continued to produce *The Pet Gazette* until the Summer of 1979. After sixteen months of producing the magazine on his own, the task had overwhelmed Len's individual resources. He was now selling ads, the magazine was typeset and included illustrations, and it was being mailed to 4000 PET enthusiasts, still for free. It was clearly time for something to change.

Robert Lock, then president of Small Systems Services, Inc., negotiated with Len to take over the monumental task of producing *The Pet Gazette*. They reached an agreement, and Lindsay and Lock issued a joint press release in August of 1979 announcing the acquisition of *The Pet Gazette* by Small Systems and its name change to *COMPUTE!* Len stayed on as an Editor (the exact title seemed rather flexible from issue to issue), and his work appeared in the pages of *COMPUTE!* for the first 12 issues.

The first issue of *COMPUTE!* was mailed to Len's 4000 subscribers and included articles and advertisements from *PET Gazette* regulars. In subsequent issues, *COMPUTE!* expanded to cover other computers, and its circulation and prestige grew, too. Lock and his organization provided the business savvy and personnel to build on what Len had established to make *COMPUTE!* Publications a strong player in microcomputer publishing.

The early issues of *COMPUTE!* paid tribute to Len's valuable role in the establishment of *The Pet Gazette*, which formed the true foundation of *COMPUTE!* In issue two, Lock says "We began, as most of you readers know, by acquiring *The Pet Gazette*, a magazine started by Len Lindsay almost two years ago." But the subtitle "*The Pet Gazette With A New Name*" was already gone from the cover.

That Len has been all but forgotten by *COMPUTE!* and *COMPUTE!'s* readers is unfortunate. This industry had few pioneers, and it behooves us to remember those we had. Let's hope that *COMPUTE!* doesn't feel the need to emphasize the "Founder" after Robert Lock's name every time we see it in print. We would hope Robert Lock could be secure enough with his many actual accomplishments to give some credit to Len Lindsay as the man who laid *COMPUTE!'s* foundations.

8. We have lists or access to lists of computer retailers, manufacturers, etc.

9. Here's our proposal:

As of August 1, 1979, The PET Gazette is published by Small System Services, Inc. We will establish a separate division within our company called "The PET Gazette."

We handle all retailing and distribution; layout, final editing, etc. thru printing. You provide us with whatever materials you have available on a periodic schedule we'll agree on. All subscriber, dealer and advertising inquiries come to us. We'll work out the fine points of maintaining the flow of information and letters from the readership to you.

As of August 1, you become a consultant retained by The PET Gazette division of Small System Services, Inc. In this capacity, you receive \$250.00 per issue plus 10% of revenues generated by advertising placements above a baseline of \$2000.00/issue (up to \$5,000 per issue). Above \$5,000.00 you receive 5% of revenues generated. As the magazine expands, we would expect to increase your remuneration along with it.

I hope you don't find the idea of remuneration offensive. We expect to build the magazine into a broad based, profitable enterprise. We also expect the magazine to retain your direct influence in the reputation for honesty and integrity you're already developed for it.

10. Your role, some thoughts... a continuing Editors Column written by you. A product/software review section written by you (perhaps more of an Industry Watch type column). Letters to the Editor. One (as possible, but hopefully) per issue lead article on whatever strikes you.

Part of Robert Lock's July 19, 1979 letter to Len Lindsay -
It seems that somebody found the idea of remuneration offensive.

MILLIONS OF DOLLARS

Unfortunately for Lindsay, when Lock took over *The Pet Gazette*, the dealings between himself and Lock were verbal or written informally. Computing was a young industry, everyone knew everyone else, and hand-shakes were often the hackers' contract. Lindsay was naive enough to let the *PET Gazette* pass on to Lock without a legally binding agreement setting out the terms of compensation for Len (although the July 19, 1979 letter from Lock to Lindsay reproduced in part above contains a very explicit proposal detailing the amounts and means by which Len was to receive payment.)

Initially, Len has told us, he agreed to allow his share of advertising and other profits to be "plowed back" into Lock's company. Months turned into years, Lock sold *COMPUTE!* to A.B.C., and Len Lindsay still saw no material remuneration. Eventually, according to Lindsay, he filed suit in an attempt to obtain some portion of the (by this time) substantial compensation which Len says Lock promised him as a part of the original acquisition. Mr. Lindsay has recently informed us that the suit has finally been settled out of court with a strict confidentiality order from the court not to disclose the details of the arrangement.

Possessing neither the financial and legal resources of "Sixty Minutes" (nor a staffer as brassy as Mike Wallace), INFO has stopped short of sending out an investigative crew to ferret

THE PET GAZETTE

THE EVOLUTION OF A MAGAZINE

by Len Lindsay

April 1978 marked the beginning of the PET GAZETTE. It was begun by an enthusiastic, active, involved dreamer. There were, of course, high hopes, but it's beginning was quite modest. A little background about its founder may be of use.

WRITING. When I put together the first PET GAZETTE, I had a background that helped to get it started and grow. I previously was the editor, typist, etc. for a college newspaper. Thus at the beginning I knew how much time and effort a newsletter takes. (It is estimated about 10 hours per page for a newsletter editor, if he doesn't do the typing—I did the typing too!) I also was familiar with printers and camera ready copy. But a good writer I was not. In fact, my college English professor said that I was one of the worst writers she had ever seen. But maybe that was one of the reasons the GAZETTE grew. It was not stuffy and grammatically precise, but rather down to earth. I believe what one says is more important than how one says it (as long as your readers understand what you mean).

DECISION. The decision to specialize in the PET was made after analyzing the information in all the magazines and 5 full file cabinet drawers. It appeared to be the computer of the future, for the everyday person. The decision to buy a PET was made, and the first issue of the PET GAZETTE was compiled. My PET did not arrive until MAY of 1978. Thus, my first issue was written, printed and mailed before I even had a PET.

DISTRIBUTION. The first issue was mailed to every name and address that could be found connected to the PET via an article or ad. News releases were sent to various publications. I was determined to provide information for PET users free of charge.

PROGRAMMING. I did not know BASIC very well when the PET first arrived, but learned PET BASIC very fast using my PET to help me. I don't know any other computer language. However, most PET users also seem to be in that position when they first get their PET so my articles may have been more relevant to them.

THE EVOLUTION BEGINS. The PET GAZETTE was originally to be a resource guide, to give all PET users one place to look to find any PET company's address, a list of products for the PET etc. The first issue listed two PET groups and 4 magazines. A list of 15 PET related magazine articles was printed. The list

of PET related products amounted to only 4. The software list included 11 known sources and a FREE cassette program exchange was announced along with some guides for programs and their submission. Peoples' Computers Graphic and Special Character LISTING conventions were mentioned and supported. This trend of proposing standards to help the user avoid the trap of everyone doing it a bit different was continued in future issues.

SECOND ISSUE. The second issue was twice as large. This issue contained one half page ad. The software list increased and listed specific programs and prices. The number of PET groups listed doubled to 4. The list of PET accessories increased from 4 to 11 companies, and there now were 3 pages for standards and Cassette Exchange information. This issue was published in MAY 1978, just before I received my PET. I had no PET programs myself, and luckily no one had submitted programs for exchange. I did worry about what would happen if delivery of my PET were late. Fortunately, I received my PET in time. And then I was embarrassed that in my second issue, one of my programming suggestions to improve readability of BASIC wouldn't work on the PET. I had advised indenting the inside of each FOR...NEXT loop by one space. But I found that the PET ignores all extra spaces between the line number and the start of the commands. Thus you could leave the extra spaces as you typed in the program, but when listed they would be gone. I wonder how many of my then almost 100 readers realized that at the printing of my 2nd issue of the PET GAZETTE, I still did not have a PET!

ISSUE THREE. The growth trend continued. The third issue was three times the size of the previous issue, now weighing in at 24 pages. Advertisements now took up about 8 pages. Advertising rates were kept extremely low as an incentive to get a lot of ads. I felt the PET users would appreciate being able to see all the PET products advertised in one place. There were now 2 full pages listing PET related magazine articles. The software list expanded to 2 1/2 pages. Now that I had a PET I began carefully looking at programs on the market for the PET. My reviews covered 4 pages, and began what was to become a main emphasis in the PET GAZETTE — informing PET users what to expect from programs purchased.

FOUR BRINGS PROBLEMS. This was my last monthly issue. It's 40 pages presented a problem: collating it by hand and then stapling it together. This wasn't too bad before with fewer pages and less copies. But my mailing list continued its trend of doubling each

In a written statement Lindsay delivered to INFO before the gag order, Len says in part, "[Lock] agreed to pay me 5% of all gross advertising revenues in the future. We agreed to change the magazine name to become COMPUTE. I then travelled around the country helping him promote the magazine. Three years later COMPUTE! was sold for \$20 million to ABC. I never got a penny of COMPUTE! advertising revenue yet." Len told us at the time that not only did he never receive a percentage of the ad revenues, he was never even paid for his articles.

As Len mentions in his statement, ABC (the American Broadcasting Company) bought COMPUTE! Publications Inc. in May of 1983, from Robert Lock and Small Systems Services Inc., for a reported \$20 million. It seems that COMPUTE! Publications has made Robert Lock a rich man. Len Lindsay is still working (both) his day jobs.

CONCLUSIONS

COMPUTE! began as a solid, honest publication. It was an excellent source of good information. Somewhere along the line, though, it appears that money became more important than service, wishful thinking took the place of historical accuracy, legal maneuvers supplanted fairness and honor, and "sound business" prevailed as the original hacker essence faded from the pages of "The Pet Gazette With a New Name." There's a lesson in that somewhere.

COMPUTE! and COMPUTE!'s Gazette still have some of the largest circulations in the business, but more and more INFO readers tell us they are no longer reading either of them. It's too bad, because COMPUTE! has the resources to be a really great computer magazine—it just doesn't seem to have the heart.

- BENN & MARK

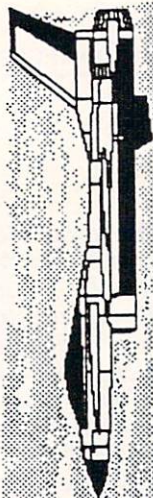


out all the "grisly" details of the case. For the inquisitive, there is available for inspection what the clerk of the U.S. District Court in Madison, Wisconsin, has described to us as "a two foot high stack of files" if you are interested in taking a look for yourself (ask for case # 85CV270); it should make interesting reading. Before the gag order came down, we were able to acquire some interesting reading of our own:

Last Fall, Len Lindsay provided INFO with a copy of the letter in which Lock laid down his proposal for the financial arrangements to be made in conjunction with the transition (see above). In part, Lock says: "As of August 1st [1979], you [Lindsay] become a consultant retained by The Pet Gazette division of Small Systems Services, Inc. In this capacity, you receive \$250.00 per issue plus 10% of revenues generated by advertising placements above a baseline of \$2000/issue (up to \$5000 per issue). Above \$5000 you receive 5% of revenues generated. As the magazine expands, we would expect to increase your remuneration [sic] along with it."

Ironically, Lock adds, "I hope you don't find the idea of remuneration [sic] offensive. We expect to build the magazine into a broad-based, profitable enterprise. We also expect the magazine to retain your direct influence in the reputation for honesty and integrity you've already developed for it."

NOTE: We tried to reach Robert Lock several times for comment or response—he never returned our calls. As is consistent with our open-forum policy, we will be happy to provide space for a written response or letter in a future issue if Mr. Lock would like to speak on these matters.



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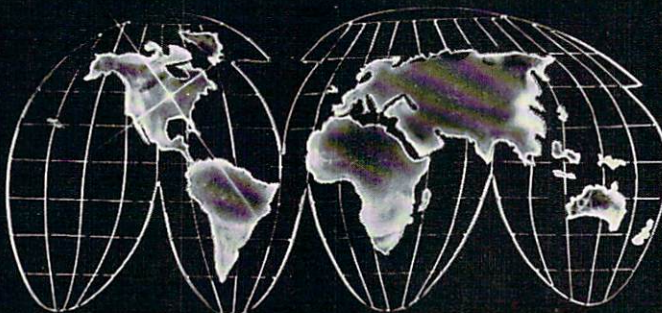
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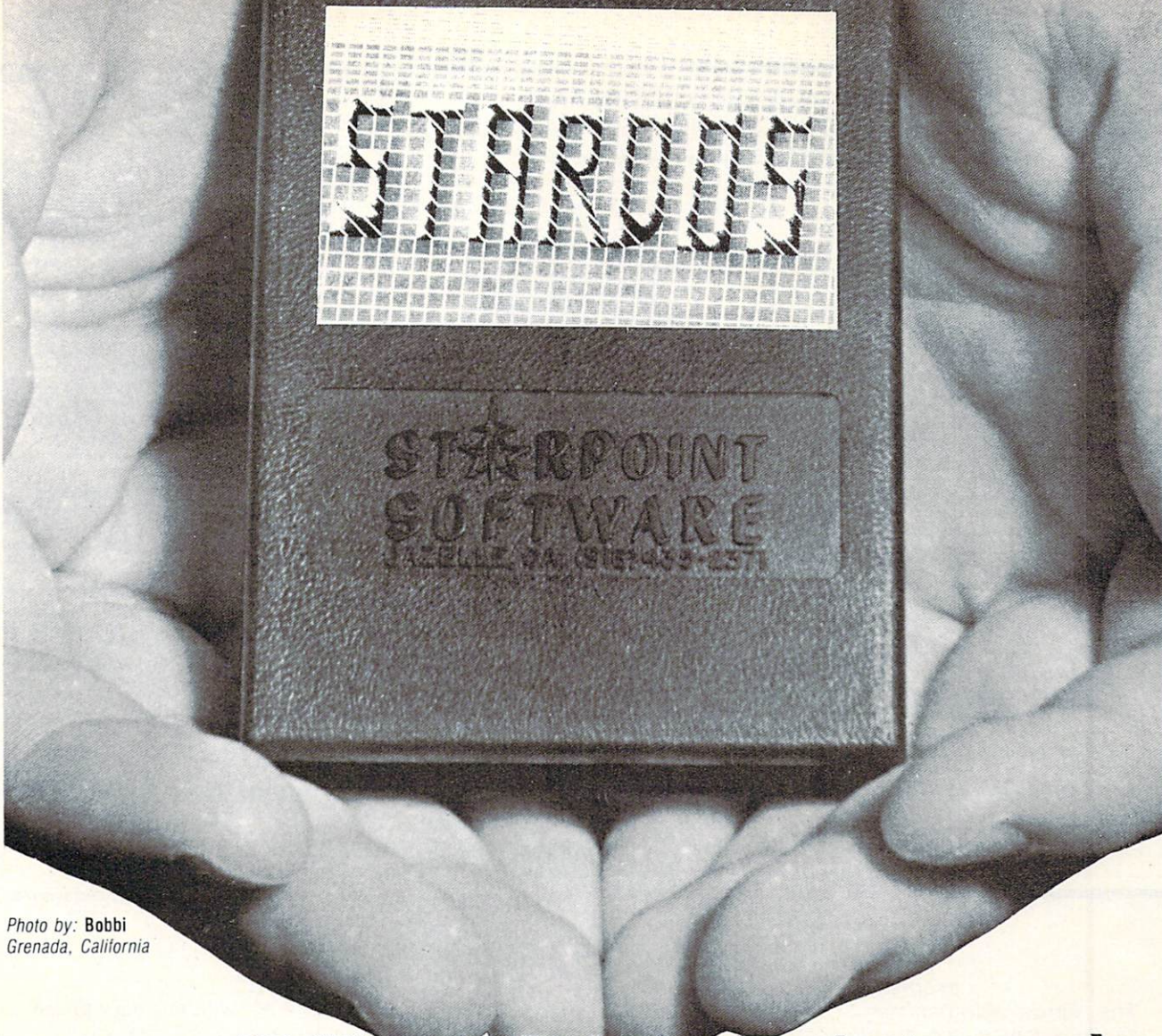


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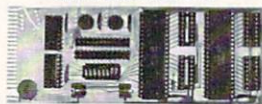
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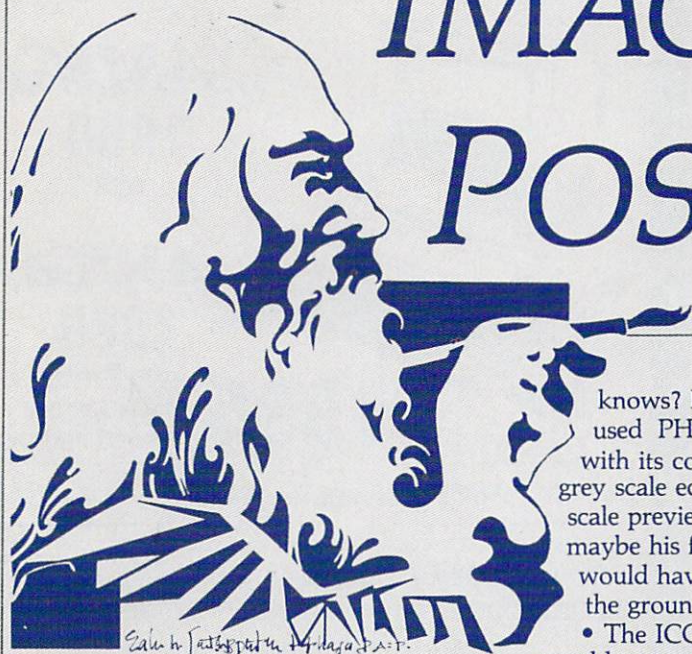


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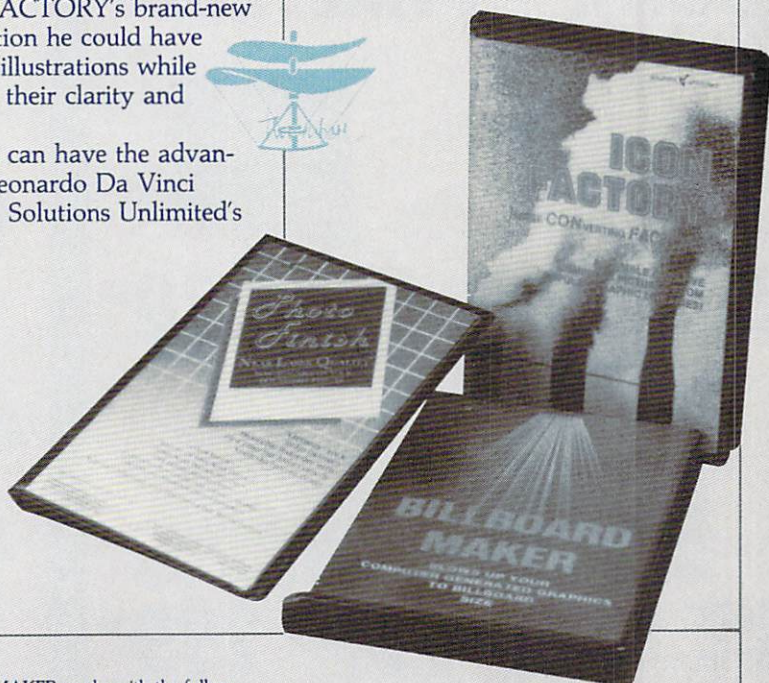
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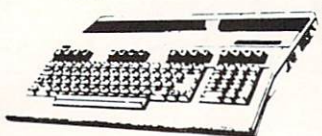
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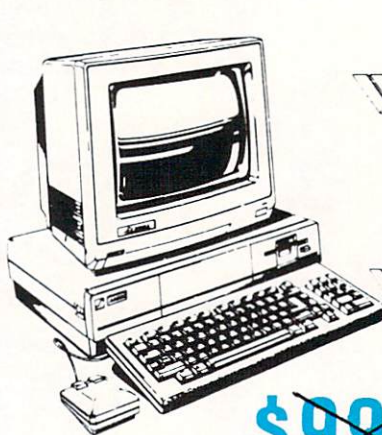


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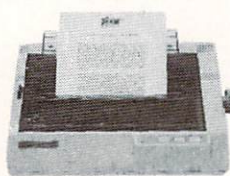
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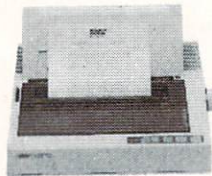
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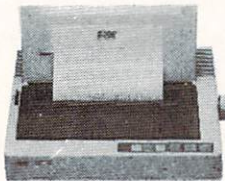


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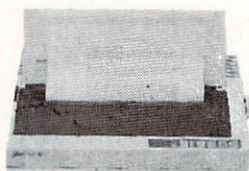


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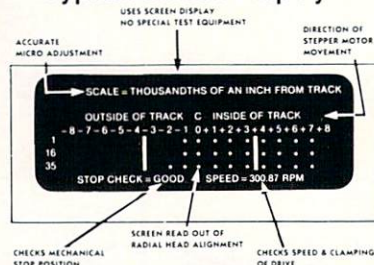
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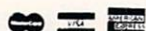
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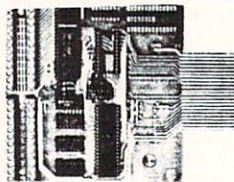
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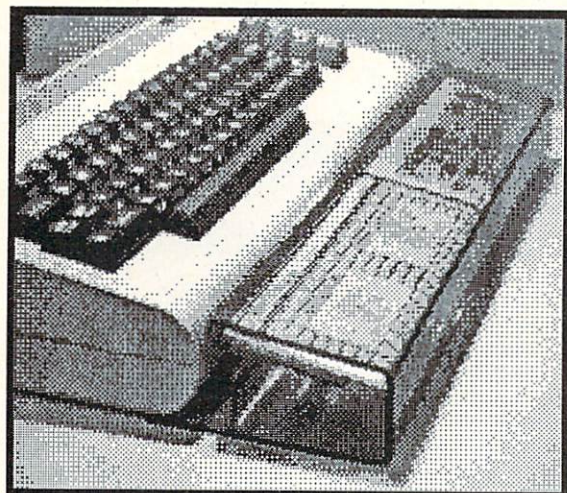
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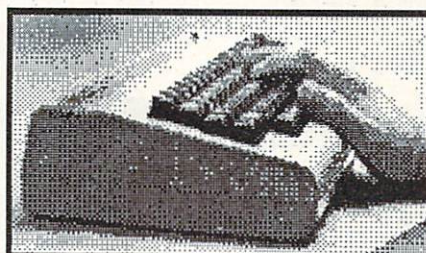
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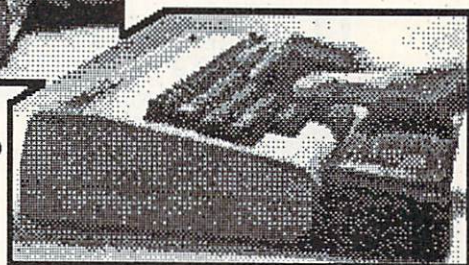


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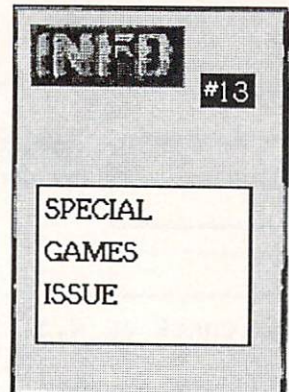
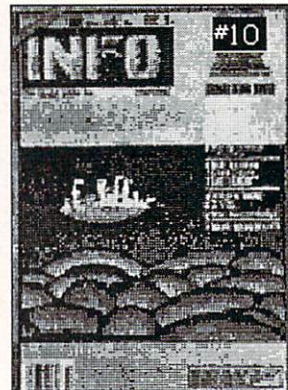
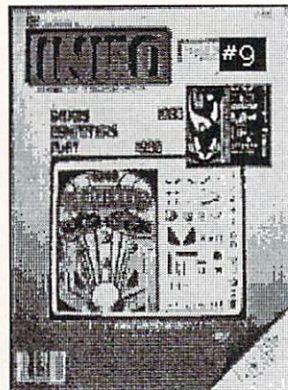
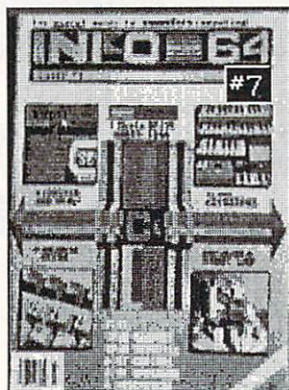
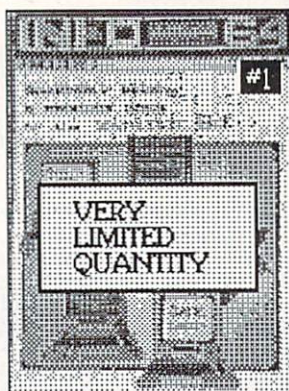
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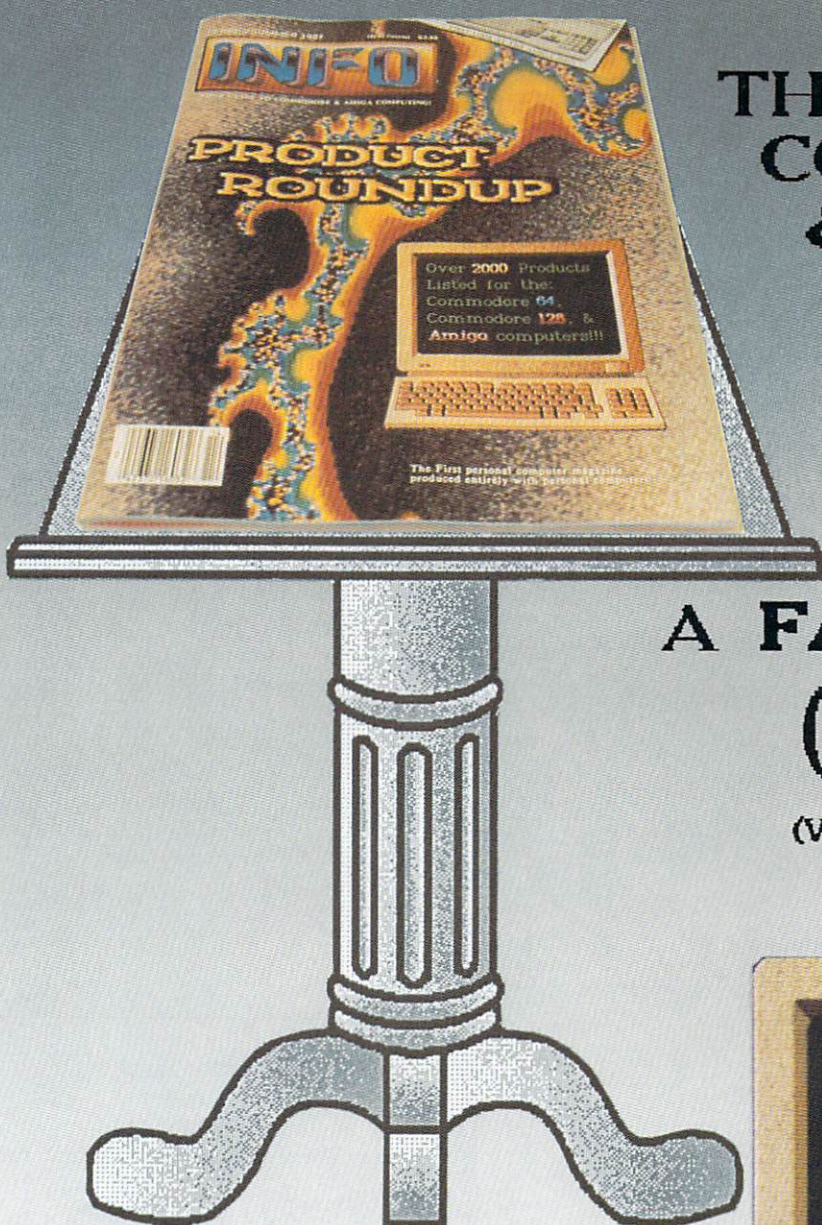
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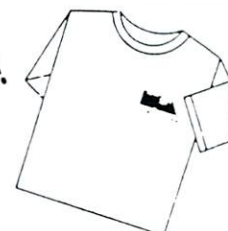
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If you've owned your Amiga® for a while now, you *know* you definitely need more than 512k of memory. You probably need *at least* double that amount...but you might need as much as an additional two megabytes. We want to urge you to use **StarBoard2** as the solution to your memory expansion problem –and to some of your other Amiga-expansion needs as well!

It's small, but it's BIG–

Since most of you want to expand your Amiga's memory without having to also expand your computer table, we designed **StarBoard2** and its two optional "daughterboards" to fit into a sleek, unobtrusive Amiga-styled case that snugly fastens to your computer with two precision-machined jackscrews.

The sculpted steel case of **StarBoard2** measures only 1.6" wide by 4.3" high by 10.2" long. You can access the inside of the case by removing just two small screws on the bottom and pulling it apart. We make **StarBoard2** easy to get into so that you or your dealer can expand it by installing up to one megabyte of RAM on the standard **StarBoard2** or up to two megabytes by adding in an Upper Deck.

This card has decks!

The basic **StarBoard2** starts out as a one megabyte memory space with 0k, 512k, or one megabyte installed. If you add in an optional **Upper Deck** (which plugs onto the Main Board inside the case) you bring **StarBoard2** up to its full two megabyte potential. You can buy your **StarBoard2** with the Upper Deck (populated or unpopulated) or buy the Upper Deck later as your need for memory grows.

And you can add other functions to **StarBoard2** by plugging in its second optional deck –the Multifunction Module!

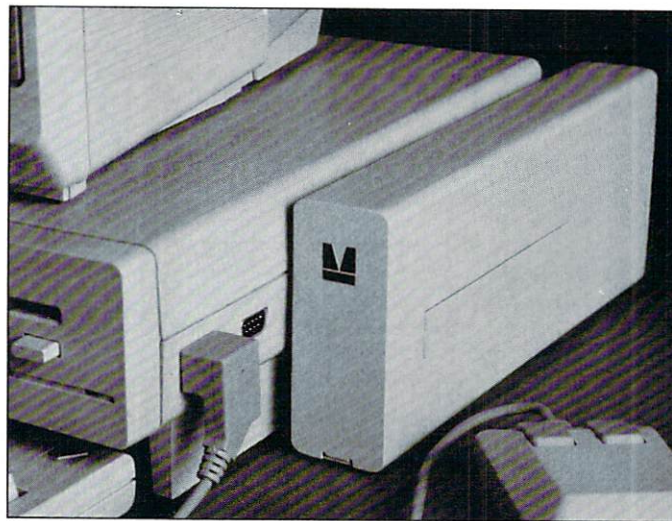
StarBoard2: functions five!

If we count Fast Memory as one function, the addition of the **MultiFunction Module** brings the total up to five!

THE CLOCK FUNCTION:

Whenever you boot your Amiga you have to tell it what time it is! Add a MultiFunction Module to your **StarBoard2** and you can hand that tedious task to the battery-backed,

**Auto-Configuring
Fast RAM
Zero Wait States
User Expandable
from 512k to
2 Megabytes
Bus Pass-Through
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Option: battery/
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real-time clock/calendar. A small piece of MicroBotics software in your WorkBench Startup-Sequence reads the clock and automatically sets the time and date in your Amiga. And the battery is included (we designed it to use an inexpensive, standard AAA battery which will last at least two years before needing replacement).

THE FLOATING POINT FUNCTION:

If any one aspect most characterizes the Amiga it's *fast* graphics! Most graphic routines make heavy use of the Amiga Floating Point Library. Replacing this library with the one we give you with your MultiFunction Module and installing a separately purchased Motorola 68881 FPU chip in the socket provided by the Module will speed up these math operations from 5 to 40 times! And if you write your own software, you can directly address this chip for increased speed in integer arithmetic operations in addition to floating point math.

THE PARITY CHECKING FUNCTION:

If you install an additional ninth RAM chip for every eight in your **StarBoard2**, then you can enable *parity checking*. Parity checking will alert you (with a bus-error message) in the event of any data corruption in **StarBoard2**'s memory space. So what good is it to know that your data's messed up if the hardware can't fix it for you? It will warn you against saving that data to disk and possibly destroying your database or your massive spreadsheet. The more memory you have in your system the more likely it is, statistically, that random errors will occur. Parity checking gives you some protection from this threat to your data residing in Fast RAM. Note that the Amiga's "chip" RAM cannot be parity checked.

THE IMMORTAL MEMORY DISK FUNCTION (STICKY-DISK):

When you've got a lot of RAM, you can make nice big RAM-Disks and speed up your Amiga's operations a lot! But there's one bad thing about RAM-Disks: they go away when you re-boot your machine. Sticky-Disk solves that problem for you. It turns all of the memory space inside a single **StarBoard2**

into a Memory Disk that will survive a warm-reboot! When your Amiga attempts to grab a **StarBoard2** in Sticky-Disk mode, a hardware signal prevents the system from acquiring the **StarBoard2** as FastRAM (and thereby erasing your files) –instead it is re-recognized as a Memory Disk and its contents are preserved intact. If you want to work rapidly with large files of data that are being constantly updated (such as when developing software) you can appreciate the Sticky-Disk!

Fast RAM –no waiting!

StarBoard2 is a *totally* engineered product. It is a ZERO WAIT-STATE design, auto-configuring under AmigaDOS 1.2 as Fast RAM. Since AmigaDOS 1.1 doesn't support autoconfiguration, we also give you the software to configure memory in 1.1.

Any applications software which "looks" for Fast RAM will "find" **StarBoard2**. And you'll find that your applications run more efficiently due to **StarBoard2** on the bus.

A passing bus? Indeed!

What good is an Expansion Bus if it hits a dead end, as with some memory cards? Not much, we think –that's why we carefully and compatibly passed through the bus so you could attach other devices onto your Amiga (including another **StarBoard2**, of course!).

The sum of the parts...

A really nice feature of the **StarBoard2** system is that you can buy exactly what you need now without closing off your options for future expansion. You can even buy a 0k **StarBoard2** (with a one megabyte capacity) and populate it with your own RAM (commonly available 256k by 1 by 150ns memory chips). When you add **StarBoard2** to your Amiga you have a powerful hardware combination, superior to any single-user micro on the market. See your Authorized Amiga Dealer today and ask for **StarBoard2**

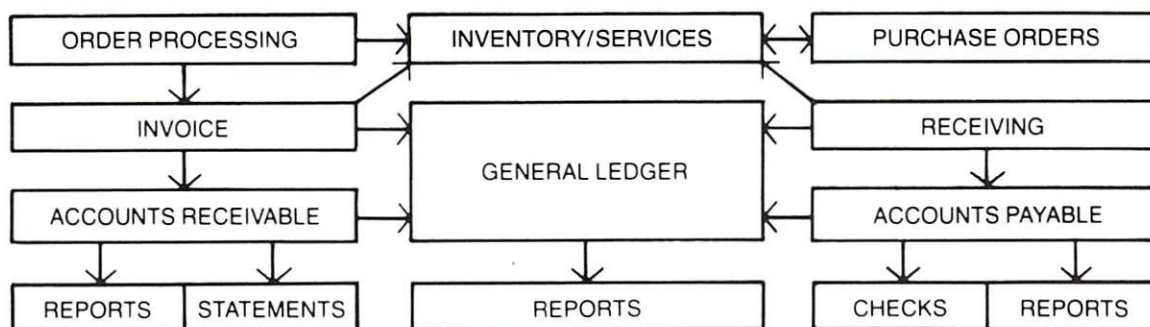
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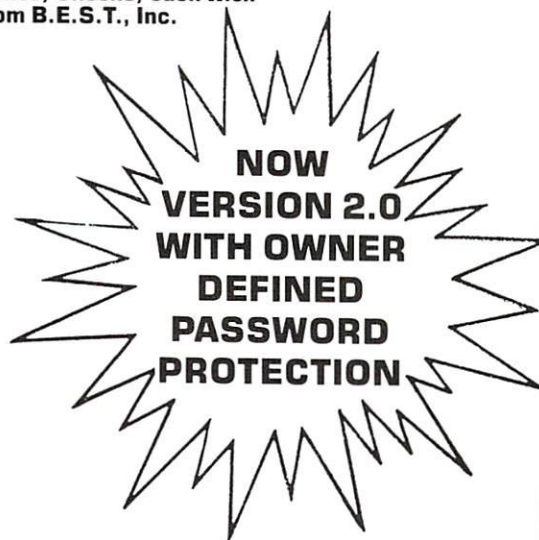
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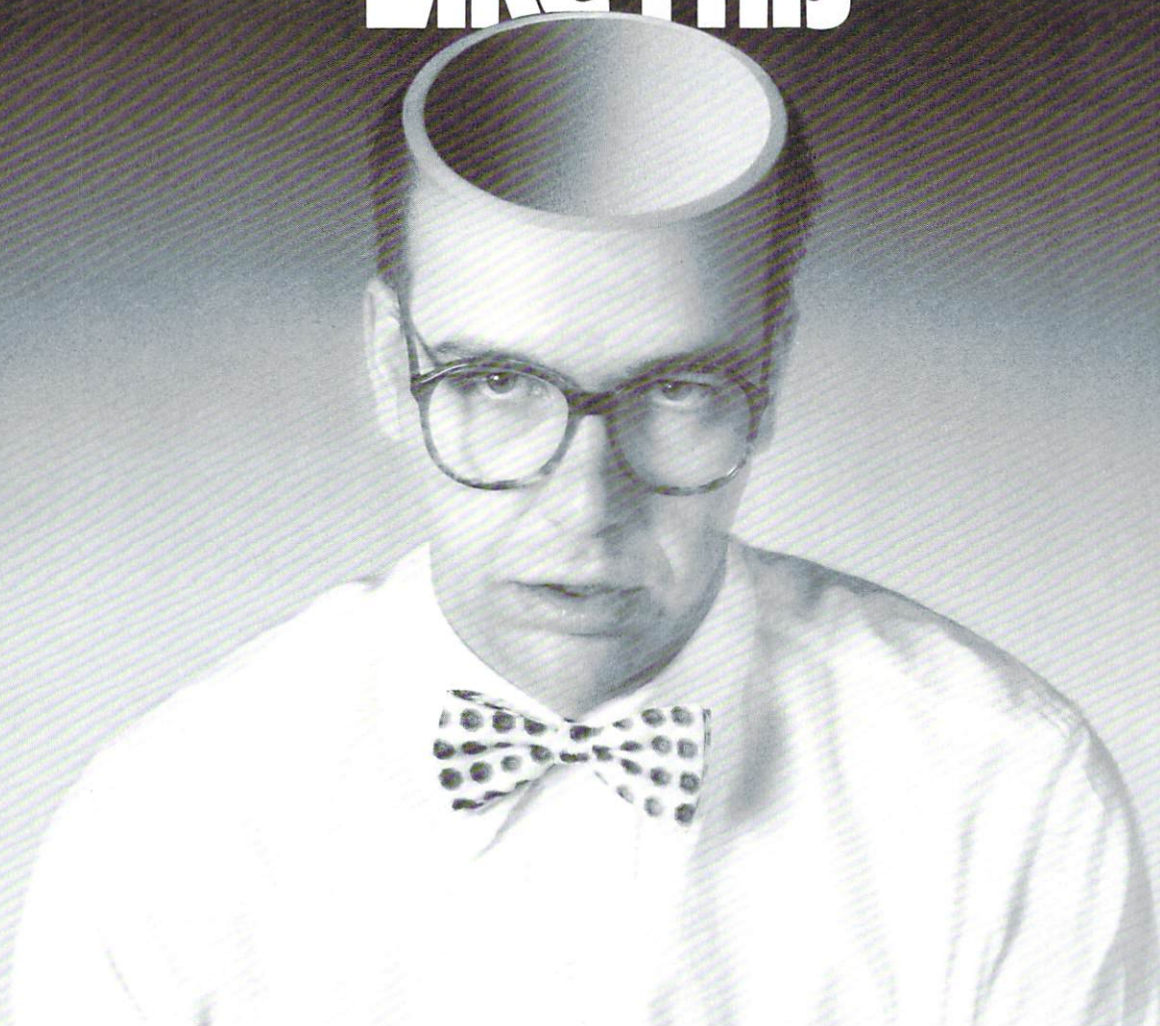
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8-21	ABS (x)	Abs value	8-32	CIRCLE [STEP] (x,y),radius [,color_id[,start,end[,aspect]]]	Draw circle/ellip
21	AREA [STEP] (x,y)	Define points			
21	AREAFILL [mode]	Fill polygon	33	CLEAR [,basicmemory][,stack]	Clear variables
22	ASC (x\$)	ASCII value	34	CLNG (x)	Conv to long-int
23	ATN (x)	Arctangent,x=rads	34	CLOSE [[#]filename],...	Close file(s)
24	BEEP	Beeps and flashes	35	CLS	Clear window
24	BREAK ON OFF STOP	Controls breaks	36	COLLISION (obj_id) ON OFF STOP	Collision detect
25	[CALL] name [argument_list]	Calls sub or m/l	37	COLOR [forecolor_id][,backcolor_id]	Define colors
28	CDBL (x)	Conv to dbl-prec	38	COMMON variable_list	Pass to chain
28	CHAIN [MERGE] filename [, [expression][,CALL][,DELETE range]]	Chain program	39	CONT	Continue prog
30	CHDIR dirname	Change directory	39	COS (x)	Cosine,x=radians
30	CHR\$ (x)	Conv to string	40	CSNG (x)	Conv to sgl-prec
31	CINT (x)	Round to integer	41	CSRLIN	Report cur line#
			41	CVI (2-byte string)	Conv to integer

41	CVL (4-byte string)	Conv to long-int	52	FIELD [#]filenum,fieldwidthASx\$...	Set field space
41	CVS (4-byte string)	Conv to sgl-prec	53	FILES dirname	List files
41	CVD (8-byte string)	Conv to dbl-prec	53	FIX (x)	Trunc to integer
42	DATA constant_list	Data statement	54	FOR a = x to y [STEP z] NEXT [a][,b...]	Execute loop
43	DATE\$	Date			End of loop
43	DECLARE FUNCTION id [(parms_list)]LIBRARY	Set to use lib	55	FRE (-1 -2 x)	Show Free mem
44	DEF FN name[(parms_list)]=funcdef	Define function	56	GET [#]filename [,recordnumber]	Read random file
46	DEFDBL letter-range	# Def as dbl-prc	56	GET (x1,y1)-(x2,y2) [,arrayname[[index[,index...]]]	Get screen array
46	DEFINT letter-range	% Def as integer	58	GOSUB linenumber label	Execute sub
46	DEFLNG letter-range	& Def as lng-int			Return to main
46	DEFSNG letter-range	! Def as sgl-prc	59	GOTO linenumber label	Jump to line
46	DEFSTR letter-range	\$ Def as string	59	HEX\$ (x)	Conv dec to hex\$
47	DELETE [line][,-line]	Delete lines	60	IF expression THEN code [ELSE code] IF expression THEN block_of_statements [ELSEIF expression THEN block_of_statements] [ELSE expression THEN block_of_statements] END IF	Conditional exec Multiline version
47	DIM [SHARED] variable_list	Dimension array			
48	END	Ends program			
48	EOF (filename)	Test end of file			
49	ERASE array_list	Erase arrays			
49	ERL	Error line			
49	ERR	Error#			
50	ERROR errornumber	Simulate Error#			
51	EXP (x)	e^x			

ERG-CARD FOR USE WITH

AMIGA BASIC PART 2

62	INKEY\$	Get keystroke	74	LLIST [line][,-line]	List prg to PRT:
63	INPUT [;][prompt_string;]var_list	Input from keys	74	LOAD [filename[,R]]	Load prg
65	INPUT\$ (x[,[#]filename])	Input keys/file	75	LOC (filename)	Last record#
65	INPUT# filename,variable_list	Input from file	75	LOCATE [line][,column]	Position cursor
66	INSTR ([i,]x\$,y\$)	Find y\$ in x\$	76	LOF (filename)	Length of file
66	INT (x)	Conv to int<=x	76	LOG (x)	Log base e x>0
67	KILL filename	Delete file	77	LPOS (x)	Report print pos
67	LBOUND (arrayname[,dimension])	Lower array bound	77	LPRINT [USING x\$;][expression_list]	Print to PRT:
68	LEFT\$ (x\$,i)	Leftmost i of x\$	78	LSET x\$=string expression	Left just/set data
68	LEN (x\$)	Length of x\$	78	MENU menu_id,item_id,state [,title screen]	Create/rest menu
69	[LET] variable=expression	Assign var=value	80	MENU RESET[(0) (1) ON OFF STOP]	Menu control
70	LIBRARY "filename" CLOSE	Open/Close lib	80	MERGE filename	Append ASCII prg
70	LINE [[STEP](x1,y1)-[STEP](x2,y2), [,color_id][,b[,f]]]	Draw line or box	81	MID\$ (x\$,n[,m])=[y\$]	m chars of x\$
71	LINE INPUT [;][prompt_string;]x\$	Instring from keys	81	MKD\$ (short_integer)	Conv to 2-byte\$
72	LINE INPUT# filename;x\$	Instring from file	82	MKI\$ (long_integer)	Conv to 4-byte\$
73	LIST [line][,-line][, "filename"]	List prg	82	MKL\$ (single_precision)	Conv to 4-byte\$

82	MDS\$ (double_precision)	Conv to 8-byte\$	94	OBJECT.Y (obj_id)	Read object y
83	MOUSE (n) ON OFF STOP	Read/Control mouse	95	OCT\$ (x)	Conv to octal\$
87	NAME "old_file" AS "new_file"	Change filename	96	ON BREAK GOSUB label line 0	Execute on break
87	NEW	Erase program	96	ON COLLISION GOSUB label line 0	Execute on colsn
88	OBJECT.AX obj_id, value	Define x accel	97	ON ERROR GOTO label line	Jump on error
88	OBJECT.AY obj_id, value	Define y accel	97	ON expression GOSUB line_list	Conditional exec
88	OBJECT.CLIP(x1,y1)-(x2,y2)	Clip borders	97	ON expression GOTO line_list	Conditional jump
88	OBJECT.CLOSE[obj_id [,obj_id...]]	Close object	98	ON MENU GOSUB label 0	Execute on menu
89	OBJECT.HITobj_id,[MMask][,HMask]	Set collision obj	99	ON MOUSE GOSUB label 0	Execute on m-but
89	OBJECT.OFF[obj_id[,obj_id]]	Make invisible	99	ON TIMER (n) GOSUB label 0	Execute n secs
89	OBJECT.ON[obj_id[,obj_id]]	Make visible	100	OPEN mode,[#]fnum,fname[,fbuf] alt: fname[FOR mode]AS[#]fnum[LEN=fbuf]	Open file
90	OBJECT.PLANESobj_id[,plane_pick] [,plane_on_off]	Set BOB parms	101	OPTION BASE n	Min array sub
90	OBJECT.PRIORITY obj_id, value	BOB priority	102	PAINTE [STEP](x,y)[p_colr[,b_colr]	Paint (area fill)
91	OBJECT.SHAPE obj_id, definition	Define BOB/sprite	103	PALETTE (color_id[,red,green,blue])	Define color
91	OBJECT.SHAPE obj_id1, obj_id2	Shape2 to shape1	104	PATTERN line_pat [,area_pat]	Define draw pat
93	OBJECT.START [obj_id [,obj_id]	Move object	105	PEEK (address)	8-bit peek
93	OBJECT.STOP [obj_id [,obj_id]	Stop object	105	PEEKL (address)	32-bit peek
93	OBJECT.VX obj_id, value	Set x velocity	106	PEEKW (address)	16-bit peek
93	OBJECT.VY (obj_id)	Read y velocity	106	POINT (x,y)	Read point color
94	OBJECT.X obj_id, value	Put object at x	107	POKE address, value	8-bit poke

ERG-CARD FOR USE WITH

AMIGA BASIC PART 3

107	POKEL address, value	32-bit poke	126	RND [(x)]	Random num 0<n<1
108	POKEW address,value	16-bit poke	127	RSET x\$ = string_expression	Move data for PUT
108	POS (x)	Read cursor col	127	RUN [label line] [filename[,R]]	Run program
109	PRESET [STEP] (x,y) [,color_id]	Set point	128	SADD (string_expression	Get string add
109	PRINT [USING x\$;][express_list]	Print to screen	128	SAVE [filename [,A P B]]	Save program
116	PRINT# fnum[USINGx\$;][exp_list]	Print to file	129	SAY "string" [,mode_array]	Speak string
119	PSET [STEP] (x,y) [,color_id]	Set point	132	SCREEN scrn_id,wide,high,deep,mode	Define screen
119	PTAB (x)	Tab to pixel pos	132	SCREEN CLOSE screen_id	Close screen
120	PUT [#] filename [,record_num]	Write record	134	SCROLL (x1,y1)-(x2,y2), dx, dy	Scroll window
120	PUT [STEP](x,y),array[(ix [,ix...]][,verb]	Draw image	135	SGN (x)	Sign
121	RANDOMIZE [expression] [TIMER]	Reseed RND	135	SHARED variable_list	Share sub vars
122	READ variable_list	Read DATA	136	SIN (x)	Sine,x=radians
122	REM '	Remark	136	SLEEP	Wait for activity
123	RESTORE [label line]	Restore DATA	137	SOUND freq,duration[,vol[,voice]]	Produce sound
123	RESUME [0 NEXT line]	Cont after err		SOUND WAIT RESUME	Sync voices
125	RIGHT\$ (x\$,i)	Right i of x\$	139	SPACE\$ (x)	x spaces
			140	SPC (x)	Space in PRINT

141	SQR (x)	Square root, x>=0	153	VARPTR (variable name)	Get variable add
142	STICK (n)	Read joystick	154	WAVE voice, wave_definition	Define waveshape
143	STOP	Stop program	155	WHILE expression [statements] WEND	Loop while true
143	STRIG (n)	Read joy trigger	156	WIDTH [output_device #]filename LPRINT][size][,print_zone]	Set line width
144	STR\$ (x)	Conv num to str\$	158	WINDOW window_id[,title][, [(x1,y1)-(x2,y2)][,type][,screen_id]]]	Make window
144	STRING\$ (i, j x\$)	Make repeat str\$		WINDOW CLOSE window_id	Close window
145	SUB name [(parameter_list)] STATIC [EXIT SUB]	Start subprogram		WINDOW OUTPUT window_id	Pick window
	END SUB	Jump back to main		WINDOW (n)	Read window info
147	SWAP variable, variable	Exchange contents	162	WRITE [expression_list]	Write to screen
147	SYSTEM	Exit to WorkBench	162	WRITE# filename, expression_list	Write to file
148	TAB (x)	Tab to position x			
148	TAN (x)	Tangent,x=radians			
149	TIME\$	Time hh:mm:ss			
150	TIMER [ON OFF STOP]	Timeer/secs			
150	TRANSLATE\$ ("string")	Translate for SAY			
151	TROFF	Trace off			
151	TRON	Trace on			
67	UBOUND (arrayname[,dimension])	Upper array bound			
152	UCASE\$ (string_expression)	Conv to uppercase			
153	VAL (x\$)	Conv str\$ to num			

KEY:	Or--Pick one option	TINT=GRAPHICS/SOUND COMMANDS
[]	Optional parameters	
one_two	Parameter name	Page numbers are references to
n	Positive integer	Section 8 of the spiralbound
a,x,y,z	Numeric variable	Amiga BASIC manual. They are
x\$	String variable	also correct to within a page
dx,dy	Change in x or y	of the older looseleaf manual.

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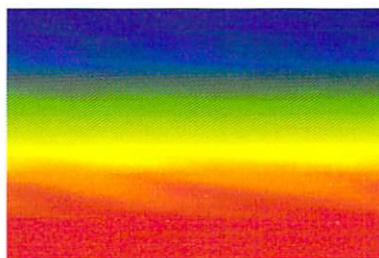
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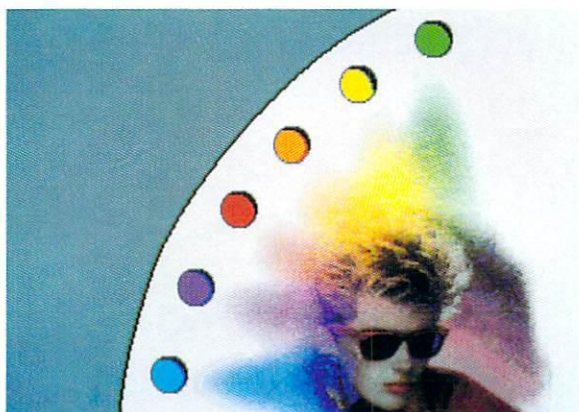
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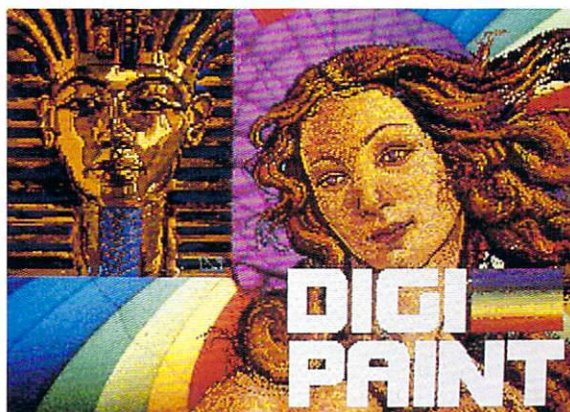


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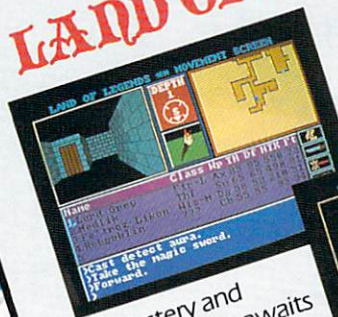
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